

**H.R. 596, “PUBLIC LANDS RENEW-
ABLE ENERGY DEVELOPMENT ACT
OF 2013”; H.R. 1363, “EXPLORING
FOR GEOTHERMAL ENERGY ON
FEDERAL LANDS ACT”; AND
H.R. 2004, “GEOTHERMAL PRODUC-
TION EXPANSION ACT OF 2013”**

LEGISLATIVE HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND
MINERAL RESOURCES

OF THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

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LEGISLATIVE HEARING ON H.R. 596, TO PROMOTE THE DEVELOPMENT OF RENEWABLE ENERGY ON PUBLIC LANDS, AND FOR OTHER PURPOSES, “PUBLIC LANDS RENEWABLE ENERGY DEVELOPMENT ACT OF 2013”; H.R. 1363, TO PROMOTE TIMELY EXPLORATION FOR GEOTHERMAL RESOURCES UNDER EXISTING GEOTHERMAL LEASES, AND FOR OTHER PURPOSES, “EXPLORING FOR GEOTHERMAL ENERGY ON FEDERAL LANDS ACT”; AND H.R. 2004, TO EXPAND GEOTHERMAL PRODUCTION, AND FOR OTHER PURPOSES, “GEOTHERMAL PRODUCTION EXPANSION ACT OF 2013”

**Tuesday, July 29, 2014
U.S. House of Representatives
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
Washington, DC**

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 1334, Longworth House Office Building, Hon. Doug Lamborn [Chairman of the Subcommittee] presiding.

Present: Representatives Lamborn, Gohmert, Bishop, Wittman, Broun, Fleming, Thompson, Lummis, Benishek, Duncan, Gosar, Flores, Mullin, Daines; Holt, Cartwright, Costa, Tsongas, Huffman, Lowenthal, and Cárdenas.

Also Present: Representative Labrador.

Mr. LAMBORN. The Chairman notes the presence of a quorum, which, under Committee Rule 3(e), is two Members.

The Subcommittee on Energy and Mineral Resources is meeting today to hear testimony at a legislative hearing on three bills: H.R. 596, introduced by my colleague, Representative Gosar of Arizona, to promote the development of renewable energy on public lands, and for other purposes, called the “Public Lands Renewable Energy Development Act of 2013”; H.R. 1363, introduced by my colleague, Representative Labrador, to promote timely exploration for geothermal resources under existing geothermal leases, and for other purposes, the “Exploring for Geothermal Energy on Federal Lands Act”; and, finally, H.R. 2004, introduced by my colleague, Representative Simpson, to expand geothermal production and for other purposes, titled the “Geothermal Production Expansion Act of 2013.”

Under Committee Rule 4(f), opening statements are limited to the Chairman and Ranking Member of the Subcommittee. However, I ask unanimous consent to include any other Members' opening statements in the hearing record, if submitted to the Clerk by close of business today.

[No response.]

Mr. LAMBORN. Hearing no objection, so ordered.

I also ask unanimous consent to allow Representative Labrador to participate in today's hearing.

[No response.]

Mr. LAMBORN. Hearing no objection?

Dr. HOLT. No objection.

Mr. LAMBORN. So ordered. I now recognize myself for 5 minutes.

STATEMENT OF THE HON. DOUG LAMBORN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Mr. LAMBORN. I would like to thank our witnesses for all being here today. Today the Natural Resources Subcommittee on Energy and Mineral Resources is meeting for a legislative hearing on three bills: H.R. 1363, H.R. 596, and H.R. 2004. These three bills aim to streamline renewable energy permitting, and facilitating increased production of renewable energy on Federal lands.

Throughout this Congress, the House Natural Resources Committee has emphasized that the best way to ensure American energy security and decrease our Nation's dependence on foreign sources of energy is to utilize the resources we have in our own country, an all-of-the-above energy strategy. This includes conventional and renewable sources of energy, as well as new and emerging energy technologies.

Unfortunately, while the Obama administration claims to be supportive of all sources of American-made energy, the reality on the ground is a different story. Energy projects continue to be held up by bureaucratic delays and lawsuits for months, and sometimes years, that delays not only energy production, but also job creation, increased revenue to states and local governments, and economic growth.

Further, the administration has limited projects to small areas of Federal land, and has delayed permit approval for simple exploratory actions that require extremely small amounts of land, yet take many months to approve.

Recently obtained documents from the Department of Energy show that the geothermal NEPA process takes 5 to 7 years, longer than both oil and gas projects and solar and wind projects, which take 3 to 5 years, and 1½ years, respectively.

Additionally, the geothermal NEPA review process requires over 175 document sets for each project. That is not 175 documents, but document sets, which equates to hundreds or even thousands of pages of documents for one project. These requirements are significant barriers, and lead to extremely long delays in geothermal production.

The Geothermal Energy on Federal Lands Act will streamline the NEPA process for a geothermal test project, which will allow a geothermal project to quickly move forward if resources are found. Permitting this simple project, which disturbs only a small

amount of ground, often in areas where activity is already taking place, can take up to 10 months. But it is often held up for more than a year. Streamlining this permitting process will allow geothermal resources to be expeditiously discovered and utilized.

The Geothermal Production Expansion Act would allow for non-competitive geothermal leasing on Federal land adjacent to private lands that are primary sources for geothermal energy. The Public Lands Renewable Energy Development Act creates a competitive leasing program and royalty payments for renewable energy projects on Federal lands, and shares those royalty payments with county and state governments.

Part of the benefits of energy development on Federal land is the revenue it brings to small state and local governments, revenue which goes toward education and community services. Unfortunately, areas that are rich in renewable energies where development is occurring do not share the same benefits from energy production on their lands. This is unlike oil and gas projects with an established royalty payment, part of which goes back to local and state governments.

The bills we are considering today take small steps toward achieving our goal of making renewable energy projects a reality on Federal lands. They will help to expedite renewable energy projects on Federal land, increase revenues to state and local governments, create jobs, and help decrease our dependence on foreign sources of energy.

Again, I would like to thank the witnesses for being here. And I look forward to hearing your testimony.

[The prepared statement of Mr. Lamborn follows:]

PREPARED STATEMENT OF THE HON. DOUG LAMBORN, CHAIRMAN, SUBCOMMITTEE ON
ENERGY AND MINERAL RESOURCES

I'd like to thank our witnesses for being with us today. Today the Natural Resources Subcommittee on Energy and Mineral Resources is meeting for a legislative hearing on three bills—H.R. 1363, the “Exploring for Geothermal Energy on Federal Lands Act,” H.R. 596, the “Public Lands Renewable Energy Development Act,” and H.R. 2004, the “Geothermal Production Expansion Act.” These three bills aim to streamline renewable energy permitting and facilitating increased production of renewable energy on Federal land.

Throughout this Congress, the House Natural Resources Committee has emphasized that the best way to ensure American energy security and decrease our Nation's dependence on foreign sources of energy is to utilize the resources we have in our own country in an all-of-the-above energy strategy. This includes conventional and renewable sources of energy, as well as new and emerging energy technologies.

Unfortunately, while the Obama administration claims to be supportive of all sources of American made energy, the reality on the ground is a different story. Energy projects continue to be held up by bureaucratic delays and lawsuits for months and sometimes years that delays not only energy production, but also job creation, increased revenues to state and local governments, and economic growth. Further, the administration has limited projects to small areas of Federal land and delayed permit approval for simple exploratory actions that require extremely small amounts of land yet take months to approve.

Recently obtained documents from the Department of Energy show that the geothermal NEPA process takes 5 to 7 years—longer than both oil and gas projects and solar and wind projects, which take 3 to 5 years and 1½ years, respectively. Additionally, the geothermal NEPA review process requires over 175 document sets for each project. This is not 175 required documents—but document sets—which equates to hundreds or even thousands of pages of documents for one project. These requirements are significant setbacks and lead to extremely long delays in geothermal production.

The “Geothermal Energy on Federal Lands Act” will streamline the NEPA process for a geothermal test project which will allow a geothermal project to quickly move forward if resources are found. Permitting this simple project which disturbs only a small amount of ground, often in areas where activity is already taking place, can take up to 10 months but is often held up for more than a year. Streamlining this permitting process will allow geothermal resources to be expeditiously discovered and utilized.

The “Geothermal Production Expansion Act” would allow for non-competitive geothermal leasing on Federal land adjacent to private lands that are primary resources for geothermal energy.

The “Public Lands Renewable Energy Development Act” creates a competitive leasing program and royalty payments for renewable energy projects on Federal lands and shares those royalty payments with county and state governments. Part of the benefits of energy development on Federal land is the revenue it brings to small state and local governments—revenue which goes toward education and community services. Unfortunately, areas that rich in renewable resources where development is occurring do not share the same benefits from energy production on their lands. This is unlike oil and gas projects with an established royalty payment—part of which goes back to local and state governments.

The bills we are considering today take small steps toward achieving our goal of making renewable energy projects a reality on Federal lands. They will help to expedite renewable energy project on Federal land, increase revenues to state and local governments, create jobs, and help decrease our dependence on foreign sources of energy. Again I’d like to thank the witnesses for taking time to appear before our subcommittee today and I look forward to hearing your testimony.

Mr. LAMBORN. I now recognize the Ranking Member for his opening statement.

STATEMENT OF THE HON. RUSH HOLT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Dr. HOLT. I thank the Chair for holding this hearing. I thank the witnesses. I look forward to hearing the testimony to discuss these three pieces of renewable energy legislation. It makes the first renewable energy hearing that we have held in this subcommittee in a year-and-a-half, I guess, nearly 2 years.

I am pleased that the Majority has brought forth two of the three bills in a bipartisan way, and it is nice to see that the bills that would waive the National Environmental Protection Act aren’t the only kinds of legislation that the Majority is capable of advancing.

The potential for renewable energy development on our public lands, it is fair to say, is tremendous. Obviously, there is the potential to create huge amounts of domestic clean energy that will make us less dependent on fossil fuels and on foreign nations, but there is also the potential for developing new industries, creating green jobs, providing valuable revenue streams. And, of course, there is the potential for making mistakes. And so, we have to do this in a wise way.

The Obama administration has taken strong steps to develop renewable energy on our public lands. Since taking office, this administration has approved nearly 14 gigawatts of renewable energy projects, nearly 10 times more than existed before—10 times more, not 10 percent more—than before they took office. And when they took office, there were no solar energy projects operating on public lands. Now there are three, and many more on the way.

I should—although that is not the subject of today’s hearings—there are still no offshore wind turbines in American waters. I remember taking a trip with this committee some years back under

a previous Chair to Denmark, seeing the offshore wind that was underway a decade ago. The administration has been taking aggressive steps, I think, in the right direction, including the announcement just this month of a competitive lease sale for wind energy off the coast of our state, in New Jersey. And I look forward to following that process closely, as we move forward.

I think it is noteworthy that, while we have three bills on the agenda today, two of them, as I mentioned, have significant Majority and Minority support. H.R. 596, the Public Lands Renewable Energy Development Act of 2013, would create a competitive leasing system for onshore solar and wind development, direct some of the revenues to states, counties, and for conservation purposes.

I understand that the wind and solar energies continue to have some concerns about moving toward competitive leasing. I hope that today's hearing will outline a process that will help rapidly move projects toward approval, while building support in local communities. I also note that H.R. 596 is supported by a broad coalition of environmental and conservation groups.

H.R. 2004, the Geothermal Production Expansion Act of 2013, was introduced by Representatives Simpson and DeFazio, and helps legitimate geothermal developers by giving them a limited and tailored opportunity to purchase a lease of up to 1 square mile non-competitively, if they have made an actual discovery. And the bill would require that these leases be announced, with a chance for people to raise objections if they believe the lease is unwarranted or the price is too low.

I recently met with Assistant Secretary Danielson of the Department of Energy's Office of Energy Efficiency and Renewable Energy, and I want to point out that their work is relevant to advancing the kinds of things that we are talking about in this legislation. I realize that is not what today's hearing is about, but since that part of the Department of Energy seems to come under attack so often here in the House, I would like to point out that it actually helps do what the Majority is trying to accomplish here.

The third bill we are hearing today, unfortunately, pulls directly from the Repeal NEPA Playbook that has been the guiding plan here in this subcommittee so often. Exploring Geothermal Energy on Federal Lands Act would exempt geothermal test wells from NEPA analysis. That is a step, a big step, in the wrong direction. I certainly support the sponsor's goal of encouraging geothermal development, but the way to do it is not by relying on waiving environmental review.

So, I look forward to the testimony, I thank the Chair for holding this hearing.

[The prepared statement of Dr. Holt follows:]

PREPARED STATEMENT OF THE HON. RUSH HOLT, RANKING MEMBER, SUBCOMMITTEE
ON ENERGY AND MINERAL RESOURCES

Thank you Mr. Chairman for holding this hearing to discuss three pieces of renewable energy legislation, which makes this the first renewable energy hearing that we've held in this subcommittee this Congress.

I am of two minds about today's hearing. On one hand, it is unfortunate that this committee has been ignoring renewable energy for so long. On the other hand, I am pleased that the Majority has brought forth two productive, bipartisan bills. It is nice to see that bills waiving the National Environmental Policy Act aren't the only proposals that can get hearings in this subcommittee.

The potential for renewable energy development on our public lands is tremendous. Obviously there is the potential to create huge amounts of domestic clean energy that will make us less dependent on fossil fuels and foreign nations, but there is also the potential for developing new industries, creating new green jobs, and providing valuable revenue streams for states, counties, and conservation.

The Obama administration has taken strong steps to develop renewable energy on our public lands. Since taking office, they have approved nearly 14 gigawatts of renewable energy projects, nearly 10 times more than existed before they took office. When they took office, there were no solar energy projects operating on public lands. Now there are three, with many more on the way.

While there are still no offshore wind turbines in American waters, the administration has been taking aggressive steps in that direction as well, including the announcement just this month of a competitive lease sale for wind energy leases off the coast of New Jersey. I look forward to following that process closely as we move forward.

Of course, this hearing deals with onshore renewables, and I think it's noteworthy that while we have three Republican bills on the agenda today, two of these bills have significant Democratic support.

H.R. 596, the Public Lands Renewable Energy Development Act of 2013, would create a competitive leasing system for onshore solar and wind development, and direct some of the revenues to states, counties, and for conservation purposes. While I understand the wind and solar industries continue to have some concerns about moving toward competitive leasing, I hope that today's hearing will outline a process that will help to rapidly move projects toward approval while building support in local communities. I'd also note that H.R. 596 is supported by a broad coalition of environmental and conservation groups, as well as states and counties, and I welcome representatives of all those groups here today, and look forward to their testimony.

H.R. 2004, the Geothermal Production Expansion Act of 2013, was introduced by Congressman Simpson and Ranking Member DeFazio, and helps legitimate geothermal developers by giving them a limited and tailored opportunity to purchase a lease of up to 1 square mile noncompetitively if they have made an actual discovery. The bill would require these leases to be announced, with a chance for people to raise objections if they believe the lease is unwarranted, or if the price would be too low.

I recently met Assistant Secretary David Danielson of the Department of Energy's Office of Energy Efficiency and Renewable Energy. His office is working to advance geothermal energy and I expect that this bill would supplement those efforts by providing a useful tool for geothermal developers and the BLM, which would discourage speculators, protect the public's interest, and help to bring geothermal projects on line more quickly.

The third bill we are hearing about today, however, unfortunately pulls directly from the Republican's repeal-NEPA playbook. H.R. 1363, the Exploring for Geothermal Energy on Federal Lands Act, would exempt geothermal test wells from NEPA analysis, which I believe is a huge step too far. I certainly support the sponsor's goal of encouraging geothermal development on public lands, but as the other two bills on the schedule today demonstrate, there are ways to do that in a bipartisan fashion that don't rely on waiving environmental review.

Again, Mr. Chairman, thank you for bringing these bills to a hearing, and for allowing us to work constructively to advance the goal of getting more renewable electricity from our public lands.

I yield back.

Mr. LAMBORN. All right, and thank you.

I will now recognize the author of H.R. 596, Representative Gosar, for a brief statement about his bill.

**STATEMENT OF THE HON. PAUL GOSAR, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF ARIZONA**

Dr. GOSAR. Thank you, Chairman Lamborn and members of the subcommittee. Thank you for the opportunity to testify on why responsibly increasing energy development on our public lands is

critical to our Nation's future energy security, and the need for passage of H.R. 596.

While I am grateful for all of our witnesses' participation today, I am extremely pleased to be joined today at this hearing by two witnesses from my home state of Arizona; Supervisor Wilson and Program Manager Fitzer. I really appreciate both of you making the trip, and look forward to your testimonies today.

Renewable energy sources like wind and solar are an integral part of a true all-of-the-above energy strategy. Our Nation's public lands can play a critical role in supporting that mission. But uncertainty in the permitting process impedes or delays our ability to harness our renewable energy potential, and must be reformed. H.R. 596, the Public Lands Renewable Energy Development Act, will help spur renewable energy development on Federal lands in a way that yields maximum benefits to states, counties, and our citizens that enjoy these lands.

My bill would bring wind and solar energy more in line with the way other forms of energy development are permitted, creating greater long-term predictability and certainty. It would direct revenues so that the states and counties received their fair share, hunting and fishing opportunities would be enhanced, and permits would be processed more efficiently.

I introduced H.R. 596 in February of 2013. Since then, the BLM has conducted two solar lease sales: one generated nearly \$6 million in high bids, and other one generated no bids. This is the type of test that my bill was designed to apply to the concept of competitive leasing for wind and solar. I look forward to hearing the testimony from the Administration and the Solar Energy Industry Association on what things they have learned from these competitive auctions. If there are lessons that can be extracted from their experiences and can strengthen my bill, then I look forward to applying them. If any of our other witnesses have suggestions for improving the bills, then I want to hear from them as well. That is exactly what the hearing is for.

What we in Congress cannot do is sit idly on our hands. There is tremendous potential for renewable energy development on our public lands. In my district, in the county that Supervisor Wilson represents, there is a BLM solar energy zone with the potential to produce up to 620 megawatts of energy. The expansive public lands of Arizona contain many parcels that are well suited for renewable energy development. This is also true for many areas across the country, especially in the West. We must take advantage of this potential right here at home, and create American jobs, while also reducing our dependence on volatile foreign energy sources.

This legislation establishes a revenue-sharing mechanism that ensures a fair return to all. H.R. 596 distributes rents and royalties by returning 25 percent of the royalties to the state, 25 to the county, 15 percent to the BLM for the purpose of more efficiently processing permit application, and 25 percent is deposited in a fund for the sportsmen and conservation purposes, including increasing outdoor recreation such as hunting, fishing, and hiking. The remaining 10 percent is deposited into the greater general fund of the U.S. Treasury for the purposes of deficit reduction.

Since Federal lands are not taxable, state and local governments deserve a share of the revenues from the sale of energy production on the lands within their borders. These resources will help local governments deliver critical services and develop much-needed capital improvement projects, such as roads, road maintenance, public safety, and law enforcement. Our Nation's public lands must play an integral role in our country's energy future.

H.R. 596 is an opportunity to address several problems with a simple solution. This bill will allow us to streamline the permitting process for effective use of public lands, spur development of renewable energy, allow local counties to benefit from sources developed within their borders, and support new access for sportsmen and outdoor enthusiasts. H.R. 596 has strong bipartisan support, with 60 total cosponsors, more than 30 of which are folks from the other side of the aisle.

The bill has also earned the endorsement of 60-plus organizations, including the National Association of Counties, the Western Governors' Association, Trout Unlimited, the Nature Conservancy, Ducks Unlimited, the American Sportfishing Association, the Association of Fish and Wildlife Agencies, the County Supervisors Association of Arizona, and countless others. I will like to submit a few of these letters and documents into the congressional record at this time.

Mr. LAMBORN. Seeing no objection?

Dr. HOLT. No objection.

Mr. LAMBORN. So ordered.

Dr. GOSAR. Thank you again, Mr. Chairman, for the opportunity to testify on the importance of H.R. 596. And, Mr. Chairman, with that I yield back.

[The prepared statement of Dr. Gosar follows:]

PREPARED STATEMENT OF THE HON. PAUL GOSAR, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF ARIZONA

Chairman Lamborn and members of the subcommittee, thank you for the opportunity to testify on why responsibly increasing energy development on our public lands is critical to our Nation's future energy security and the need for passage of H.R. 596.

While I am grateful for all of our witnesses' participation today, I am extremely pleased to be joined today at this hearing by two witnesses from my home state of Arizona. Supervisor Wilson and Program Manager Fitzer, I really appreciate you both making the trip and look forward to your testimonies.

Renewable energy sources like wind and solar are an integral part of a true all-of-the-above energy strategy. Our Nation's public lands can play a critical role in supporting that mission, but uncertainty in the permitting process impedes or delays our ability to harness their renewable energy potential and must be reformed. H.R. 596, the Public Lands Renewable Energy Development Act will help spur renewable energy development on Federal lands in a way that yields maximum benefits to states, counties, and our citizens that enjoy these lands.

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ward to applying them. If any of our other witnesses have suggestions for improving the bill, then I want to hear those as well. That is what this hearing is for.

What we in Congress cannot do is sit idly on our hands. There is tremendous potential for renewable energy development on our public lands. In my district, in the county that Supervisor Wilson represents, there is a BLM solar energy zone with the potential to produce up to 620 MW of energy. The expansive public lands of Arizona contain many parcels that are well suited for renewable energy development. This is also true for many areas across the country, especially in the West. We must take advantage of this potential right here at home and create American jobs while also reducing our dependence on volatile foreign energy sources.

This legislation establishes a revenue sharing mechanism that ensures a fair return for all. H.R. 596 distributes rents and royalties by returning 25 percent to the state, 25 percent to the county, 15 percent to the BLM for the purposes of more efficiently processing permit applications and 25 percent is deposited into a fund for sportsmen and conservation purposes, including increasing outdoor recreation such as hunting, fishing, and hiking. The remaining 10 percent is deposited into the general fund of the U.S. Treasury for the purposes of deficit reduction.

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Thank you again for the opportunity to testify on the importance of H.R. 596 Mr. Chairman and with that, I yield back.

Mr. LAMBORN. All right, thank you. We will now hear from our witnesses, and I would like to welcome Mr. D.L. Wilson, Chairman of the La Paz County Board of Supervisors.

Dr. HOLT. Mr. Chairman, since we just had unanimous consent, may I have a moment to make a request?

Mr. LAMBORN. Make your—yes.

Dr. HOLT. Yes.

Mr. LAMBORN. Make a request.

Dr. HOLT. I would ask unanimous consent to submit letters into the record here from the American Wind Energy Association, from the Geothermal Energy Association, and from the Center for Biological Diversity, Defenders of Wildlife, and other groups.

Mr. LAMBORN. OK. Is there any objection?

[No response.]

Mr. LAMBORN. If not, so ordered. OK, continuing on, Mr. D.L. Wilson, Chairman of the La Paz County Board of Supervisors, and with the National Association of Counties.

Mr. Scott Nichols, Manager for Permitting & Lands with U.S. Geothermal, Inc.

Mr. Arthur L. Haubenstock, Chairman of the Utility-Scale Solar Power Division, Solar Energy Industries Association, and Senior Counsel, Perkins Coie.

Mr. Chris Wood, President and CEO of Trout Unlimited.

Mr. Eric Fitzer, Senior Energy Programs Manager for the Arizona Governor's Office of Energy Policy.

Mr. Chase Huntley, Senior Director of Government Relations for Energy, The Wilderness Society.

And, finally, Mr. Michael Nedd, Assistant Director of Energy, Minerals, and Realty Management with the Bureau of Land Management, the U.S. Department of the Interior.

Like all of our witnesses, your written testimony will appear in full in the hearing record, so I ask that you keep your oral statements to 5 minutes.

Our microphones are not automatic, so you need to turn them on and see the green light come on when you are ready to begin.

And I also want to explain how our timing lights work. When you begin to speak, our clerk will start the timer, and a green light will appear in front of you. After 4 minutes, a yellow light appears. And after 5 minutes, the light turns red and we ask that you conclude at that time.

Mr. Wilson, you may begin. And then I will also be giving the gavel to Representative Gosar. Thank you.

STATEMENT OF D.L. WILSON, CHAIRMAN, LA PAZ COUNTY BOARD OF SUPERVISORS, ARIZONA; NATIONAL ASSOCIATION OF COUNTIES

Mr. WILSON. Good morning and thank you, Chairman Lamborn, Ranking Member Holt, and members of the subcommittee, for the opportunity to appear before you today to testify on H.R. 596, the Public Lands Renewable Energy Development Act of 2013. My name is D.L. Wilson. I am the Chairman of the La Paz County Board of Supervisors in Arizona, and the past President and CEO of the La Paz Economic Development Corporation. Today I represent both La Paz County, Arizona, and the National Association of Counties.

Prior to serving in public office, I spent 34 years working for the Arizona Public Service Company, Arizona's largest utility. La Paz County is comprised of 4,514 square miles in western Arizona, adjacent to the Colorado River, and serves a population of nearly 21,000 persons with a median income of just over \$29,000 per year. Most of La Paz County, 77.2 percent, is comprised of Federal lands that are both non-tribal and tax-exempt. La Paz County is reliant on tourism on Federal public lands as its main source of economic activity. Counties across America like La Paz County enjoy the benefits of tourism, but this also places added pressures on counties.

While tourism helps the local economy, it also taxes local infrastructure and services, including roads and bridges, emergency rescue, and law enforcement. These collective costs represent a significant and added burden for counties. H.R. 596 will help counties by creating a straightforward permitting process tailored to the unique characteristics of renewable energy projects that can be used by public land management agencies. It will also establish a revenue-sharing mechanism that ensures fair compensation to help make up for the millions of acres on which the U.S. Government pays no local taxes. Since Federal lands are not taxable, state and

local governments deserve a share of the revenue from the sale of energy production on lands within their borders.

La Paz County is in a unique position to take advantage of the provisions included in H.R. 596, particularly those that would allow for more streamlined permitting. According to a 2012 study by the National Renewable Energy Laboratory, Arizona's total technical potential for solar energy is 8,742,000 megawatts. The Quartzite Solar project, already approved on BLM land, is estimated to generate 100 megawatts of power and will add 50 new non-construction jobs to the economy. With the intent of streamlining provisions within the bill, I am hopeful that the permitting process will lead to faster turnaround.

Developing solar energy projects on public lands will create jobs, but it will also create additional demands on our county infrastructure. Roads need additional maintenance, water resources are depleted, view-sheds are modified, and wildlife is displaced. As a County Supervisor, it is my responsibility to consider how every proposed project will affect my county, from job creation to the effects on local resources. I will feel much more confident that renewable energy development will be a net benefit to my county, if I know we will receive the revenues we need to offset those costs.

H.R. 596 dedicates 25 percent of royalty revenue from public lands to the county where the project is located. If H.R. 596 is enacted, it is estimated that Arizona counties will receive \$2,274,000, based on current and approved projects. La Paz County alone is estimated to receive more than \$224,000, which is the equivalent of a \$.10 property tax rate, or nearly 5 percent of La Paz County's general fund property tax rate. This revenue sharing will give La Paz County taxpayers some additional relief from the costs associated with tax-exempt Federal land, and provide the county with the much-needed resources to provide the infrastructure and services that our citizens depend upon.

Currently, 13 percent of the La Paz County budget is funded through the Payment In Lieu of Taxes program, or PILT. As long as we have Federal land within our borders, we will continue to rely on PILT funding. PILT is a critical program for our county, and nearly 2,000 counties nationwide, as it provides payments to counties and other local governments to offset losses in tax revenues due to the presence of substantial acreage of Federal land in their jurisdictions.

Therefore, we must be assured that any funds that are derived from H.R. 596 will supplement, and not displace PILT funding. We appreciate Representative Gosar's assurances that this will be the case, and also will ask for the same commitment from the administration.

In conclusion, it is critical for public land counties throughout the country that H.R. 596 passes. This bill offers an opportunity to expand renewable energy projects throughout Arizona and La Paz County by taking advantage of the unique environment of the Southwest, allowing rural Arizona to diversify its economic portfolio, while reimbursing local taxpayers and counties for the increased costs associated with these projects, and reinvesting revenues back into the community.

La Paz County is proud to support H.R. 596. The bill has support from NACo and the individual counties all over the West. Statewide county associations in Arizona, Utah, Colorado, Idaho, Montana, Nevada, and Oregon have all passed resolutions or issued statements in support of the bill.

Chairman Lamborn, I want to thank you once again for holding this hearing and examining how a revenue-sharing renewable energy leasing program will benefit all parties involved. Congressman Gosar, I would like to thank you for bringing this bill forward, and being a champion for rural Arizona. Your hard work and dedication are greatly appreciated in La Paz County and throughout the state.

Mr. Chairman, that concludes my prepared testimony. I am happy to answer any questions the committee may have.

[The prepared statement of Mr. Wilson follows:]

PREPARED STATEMENT OF THE HON. D.L. WILSON, CHAIRMAN, LA PAZ COUNTY, ARIZONA ON BEHALF OF THE NATIONAL ASSOCIATION OF COUNTIES (NACo) ON H.R. 596

Good morning and thank you Chairman Lamborn, Ranking Member Holt, and members of the subcommittee, for the opportunity to appear before you today to testify on H.R. 596, the Public Lands Renewable Energy Development Act of 2013.

My Name is D.L. Wilson and I am the Chairman of the La Paz County Board of Supervisors in Arizona and the Past President and Chief Executive Officer of the La Paz Economic Development Corporation. Today, I represent both La Paz County, Arizona and the National Association of Counties (NACo). Prior to serving in public office, I spent 34 years working for the Arizona Public Service (APS) company, Arizona's largest utility. My combination of over three decades of energy sector experience and serving as a rural Arizona county supervisor has given me a unique perspective on our need for a multi-platform portfolio of renewable energy generation and the associated economic opportunities, as well as the potential cost to taxpayers when these projects are built on tax-exempt Federal public land.

NACo is the only national organization that represents county governments in the United States, including Alaska's boroughs and Louisiana's parishes. Founded in 1935, NACo assists America's 3,069 counties in pursuing excellence in public service to produce healthy, vibrant, safe and resilient counties. NACo promotes sound public policies, fosters county solutions and innovation, promotes intergovernmental and public-private collaboration and provides value-added services to save counties and taxpayers money.

Today I would like to speak about the positive implications that the enactment of H.R. 596 will have in speeding up the process to create renewable energy projects, creating and sharing revenue and helping to move America toward a more sustainable energy program. A future powered by renewable energy will provide a cleaner environment and lower the cost of energy to everyone.

La Paz County is comprised of 4,514 square miles (2.9 million acres) in western Arizona, adjacent to the Colorado River, and serves a population of nearly 21,000 persons with a median income of \$29,382. Most of La Paz County—77.2 percent—is comprised of Federal lands that are both non-tribal and tax-exempt. La Paz County is reliant on tourism on Federal public lands as its main source of economic activity. Counties across America, like La Paz County, enjoy the benefits of tourism but this also places added pressures on counties. While tourism helps the local economy, it also taxes local infrastructure and services including roads and bridges, emergency rescue and law enforcement. Those collective costs represent a significant and added burden for counties.

And La Paz County is not the only county facing these challenges. All 15 counties in Arizona have public land as do over half of the counties in the United States. As Federal land is not taxable by local governments, public land counties have struggled to provide adequate services to the public in light of the annual losses in tax revenue. Despite this loss of tax revenue, counties are still responsible to provide services to Federal employees and families, the public and to the users of public lands. These include education, solid waste disposal, law enforcement, search and rescue, health care, environmental compliance, firefighting, parks and recreation and other important community services.

H.R. 596 will help counties by creating a straightforward permitting process tailored to the unique characteristics of renewable energy projects that can be used by public land management agencies. It will also establish a revenue sharing mechanism that ensures fair compensation to help make up for the millions of acres of that the U.S. Government pays no local taxes on. Since Federal lands are not taxable, state and local governments deserve a share of the revenue from the sale of energy production on lands within their borders. This bill would provide 25 percent of wind and solar revenues to the state, 25 percent to counties, 15 percent to state offices of the Bureau of Land Management (BLM) and the Forest Service, and 10 percent to the Federal Government.

La Paz County is in a unique position to take advantage of the provisions included in H.R. 596—particularly those that would allow for more streamlined permitting. According to a 2012 study by the National Renewable Energy Laboratory (NREL), Arizona's total technical potential for solar energy (includes Utility scale PV, Rooftop PV, and CSP) is 8,742,000 MW. The Quartzite Solar project, already approved on BLM land, is estimated to generate 100 MW of power and will add 50 new, non-construction jobs to the economy. With the intended streamlined permitting provisions within the bill, I am hopeful that the permitting process will lead to faster turnaround. There is no reason why the BLM should take several years to permit a 1-mile power line project when La Paz County can do permits in 3 weeks.

Developing solar energy projects on public lands will create jobs, but will also create additional demands on our county infrastructure. Roads need additional maintenance, water resources are depleted, view-sheds are modified and wildlife is displaced. As a county supervisor, it is my responsibility to consider how every proposed project will affect my county—from job creation to the effects on local resources. I will feel much more confident that renewable energy development will be a net benefit to my county if I know we will receive the revenues we need to offset those costs. H.R. 596 dedicates 25 percent of royalty revenue from public lands to the county where the project is located.

The responsible development of renewable energy projects will result in job growth and infrastructure development in La Paz County, to the benefit of our residents and visitors through direct investment and increased county services. The shared revenue from renewable energy developments will also enhance our efforts to improve access to Federal lands and waters in our county for hunting, fishing and other forms of outdoor recreation in a manner that conserves fish and wildlife habitats, all of which are crucial to our tourism-based economy.

If H.R. 596 is enacted, it is estimated that Arizona counties will receive \$2,274,547 based on current and approved projects. La Paz County alone is estimated to receive \$224,394, which is the equivalent of a 10-cent property tax rate, or nearly 5 percent of La Paz County's general fund property tax rate. This revenue sharing will give La Paz County taxpayers some additional relief from the costs associated with tax-exempt Federal land—and provide the county with the much needed resources to provide the infrastructure and services that our citizens depend on.

Currently 13 percent of the La Paz County budget is funded through Payment in Lieu of Taxes program or PILT. As long as we have Federal land within our borders, we will continue to rely on PILT funding. PILT is a critical program for our county and nearly 2,000 counties nationwide as it provides payments to counties and other local governments to offset losses in tax revenues due to the presence of substantial acreage of Federal land in their jurisdictions. Therefore, we must be assured that any funds that are derived from H.R. 596 will supplement and not displace PILT funding. We appreciate Rep. Gosar's assurances that this will be the case and also ask for the same commitment from the administration. Establishing a new source of revenue through renewable energy development will help our county and many others diversify our funding base.

Counties nationwide have Federal lands within their boundaries that have been developed or are suitable for alternative energy development. Future revenue sharing dollars will contribute to the delivery of critical governmental services and the development of much needed capital improvement projects such as road maintenance, public safety and law enforcement, conservation easements, capital for leveraging Federal and state resources, and the critical stabilization of operations budgets in tough economic times.

As this Nation moves closer to securing a balanced domestic energy portfolio, counties are committed to working with the states and the Federal Government as equal partners in the promotion of alternative energy development. The expansion of green energy industries will lead to the creation of high paying jobs and sustainable economic development.

In conclusion, it is critical for not just La Paz County, but public land counties throughout the country that H.R. 596 passes. This bill offers an opportunity to expand renewable energy projects throughout Arizona and La Paz County by taking advantage of the unique environment of the Southwest, allowing rural Arizona to diversify its economic portfolio while reimbursing local taxpayers and counties for the increased cost associated with these projects and reinvesting revenues back into the community.

La Paz County is proud to support H.R. 596. The bill has support from the NACo and individual counties all over the West. Statewide county associations in Arizona, Utah, Colorado, Idaho, Montana, Nevada and Oregon have all passed resolutions or issued statements of support for the bill.

Chairman Lamborn, I want to thank you once again for holding this hearing and examining how a revenue sharing, renewable energy leasing program can benefit all parties involved and encourage the development of renewable energy in the Southwest and throughout America.

Congressman Gosar, I would like to thank you for bringing this bill forward and for being a champion for rural Arizona. Your hard work and dedication are greatly appreciated in La Paz County and throughout the state.

Mr. Chairman, that concludes my prepared testimony, I am happy to answer any questions the committee may have.

Dr. GOSAR [presiding]. Thank you, Mr. Wilson.
Mr. Nichols.

STATEMENT OF SCOTT NICHOLS, MANAGER, PERMITTING & LANDS, U.S. GEOTHERMAL, INCORPORATED

Mr. NICHOLS. Thank you, Representative Gosar, Mr. Chairman, and members of the committee. My name is Scott Nichols. I am here to represent U.S. Geothermal. We are a publicly-traded geothermal power company that specializes in the exploration, development, and operation of utility-scale geothermal power plants. My comments today are focused on H.R. 2004 and H.R. 1363.

With regard to H.R. 1363, the categorical exclusions discussed in this bill are critical to the geothermal industry. We currently, as you noted, go through hundreds of environmental documents throughout the permitting of the geothermal operation. And yet, simple exploration is set off for months, decisions are delayed, and we have a basic inability to move forward on very simple exploration projects.

The need for H.R. 1363 and a revision of the categorical exclusions for geothermal development are outlined in numerous other regulations and within numerous other regulated industries. H.R. 1363 simply asks that the geothermal industry be put on a level playing field with other industries. Some of these other areas that demonstrate the need for this change include the CEQ regulations themselves, the Department of the Interior's Federal regulations, the Environmental Policy Act of 2005, the BLM's NEPA Handbook, and the Department of Energy's regulations also pertaining to geothermal energy projects.

With regard to the National Environmental Policy Act regulations, 40 CFR 1500 specifically notes that the BLM should use categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment.

One of the things I would like to advise the wind and solar industries about regarding competitive leasing is that, under our current regulations for geothermal, 40 CFR 1301.11 of the BLM

Federal regulations states that the BLM will not lease geothermal resources in areas or in instances where they would expect any sort of undue or unnecessary land disturbance and actions. Specifically, if an area is subject to or awarded geothermal leases, the BLM has already made a decision that those areas are suitable for geothermal development, and we are subjected to a plethora of additional decisions that continue not only through our exploration phase, for minimal small acreage test holes, but throughout the operation for any changes in the operation at all.

Section 390 of the Energy Policy Act allows the oil and gas industry to disturb multiple 5-acre disturbances to a cumulative surface disturbance of 150 acres within a known producing area. In the geothermal industry, I spent 6 months and over \$60,000 implementing a ½-acre exploration hole for a geothermal development. We are continuing to review this operation through normal NEPA channels. And yet, other industries are allowed to move ahead without concern.

The BLM's own regulations recommend that CX's, categorical exclusions, or exclusions be developed for other industries. Timber, mining, real estate, other activities are all allowed to move ahead under these categorical exclusions.

With regard to H.R. 2004, the Leasing Act, I would like to say that leasing these small areas adjacent to a known geothermal resource is critical to the advancement of geothermal development. Right now we have acres of land within our western states that are intermixed with private and state lands. There is no incentive for the geothermal industry to put these areas up for lease and have to then competitively bid on those sources.

H.R. 2004 is a small, incremental step, consistent with three other non-competitive leasing opportunities. It would add a fourth level of non-competitive lease that would allow a geothermal developer like U.S. Geothermal to acquire these additional lands in a non-competitive manner. Without that opportunity, those lands will continue to go undeveloped, and we have no incentive to produce geothermal royalties for the treasury.

H.R. 2004 maximizes lease revenue, and I would encourage you to consider this seriously and move forward with both of these resolutions. Thank you.

[The prepared statement of Mr. Nichols follows:]

PREPARED STATEMENT OF SCOTT NICHOLS, MANAGER OF PERMITTING & LANDS, U.S. GEOTHERMAL INC. ON H.R. 1363 AND H.R. 2004

Mr. Chairman and members of the subcommittee, my name is Scott Nichols and I am here today representing U.S. Geothermal Inc. U.S. Geothermal is a publicly-traded company that explores for, develops, builds and operates utility scale geothermal power plants. We are a member of the board of directors of the Geothermal Energy Association, a trade association composed of U.S. companies who support the expanded use of geothermal energy and who are developing geothermal resources worldwide for electrical power generation and direct-heat uses. The membership of the Geothermal Energy Association includes large utilities and Independent Power Producers like U.S. Geothermal, equipment suppliers, drilling companies, technical and financial service providers. These companies are primarily focused on the exploration, development and generation of clean, base load electricity from our country's geothermal resource base.

U.S. Geothermal supports House Bill 1363, Exploring for Geothermal Energy on Federal Lands Act. This bill establishes a new Categorical Exclusion for land disturbances related to geothermal exploration. This new categorical exclusion is a necessary and long overdue response to the geothermal industry's need for efficient and streamlined regulatory expectations.

Your favorable action on this bill is necessary because of the BLM's rigid approach and interpretation of the CEQ regulations and BLM management's inability to respond to industry needs under the current regulations.

Compelling evidence and justification for a geothermal exclusion is found within the:

- CEQ Regulations 40 CFR 1500.5(k),
- Department of Interior's Federal Regulations 43 CFR § 3201.11,
- EPAct of 2005,
- BLM's NEPA Handbook H-1790-1, and
- Department of Energy's Federal regulations.

40 CFR 1500.5(k) directs the BLM to use categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement. The BLM has failed to take action and proactively implement geothermal categorical exclusions that would reduce paperwork and allow a focused use of staff resources. Geothermal development is currently subjected to multiple and repetitive NEPA analyses that begin prior to leasing and continue throughout power plant operations. Multiple analyses and public review of drilling and maintenance work, within an area designated for geothermal development, is unnecessary and not consistent with stated purpose of the National Environmental Policy Act and the CEQ guidelines.

The Department of Interior's regulations, 43 CFR § 3201.11 state that the BLM will not issue leases for Lands where the Secretary has determined that issuing the lease would cause unnecessary or undue degradation of public lands and resources. The decision to issue a geothermal lease has been subjected to public review. Issuance of a geothermal lease, by default, is the BLM's determination that the area is suitable for geothermal development and will not cause undue or unnecessary degradation.

Section 390 of the Energy Policy Act of 2005 established five CXs that apply only to oil and gas exploration and development. One CX allows individual surface disturbances of less than 5 acres as long as the total surface disturbance on the lease does not exceed 150 acres of surface disturbance on a lease as long as any prior NEPA document was prepared. A second CX allows drilling from locations at which drilling was conducted within the past 5 years. Categorical Exclusions for geothermal exploration and infill drilling should be similar to those for the oil and gas industry.

The Department of Energy ("DOE") recognizes and understands the types of activities required for geothermal exploration and operations. To streamline regulatory reviews, DOE established Exclusions B3.1(c) for site characterization and monitoring B3.1(d) that allows aquifer and underground reservoir response testing and B3.7 for new infill exploratory and experimental wells for brine or geothermal fluid among other resources. The BLM should implement the same Categorical Exclusions as the Department of Energy.

BLM allows significant surface impacts under CXs for other resource exploration programs and oversees the use of current CXs across these different programs. Specifically in mineral exploration, the department's published CXs allow trenching and digging without acreage limitations, disposal of up to 50,000 cubic yards of mineral material and disturbing up to 5 acres. Additional CXs allow construction of temporary work camps and up to ½ mile of new temporary road construction. The Department's locatable mineral regulations also provide a total exemption from NEPA and allow a claimant to conduct mining operations and exploration drilling on up to 5 acres (25 percent of a 20-acre claim) by filing a Plan of Operation only 10 days prior to beginning operations. The BLM should be directed to apply CXs across programs based on commensurate surface disturbance, not the causative activity.

At a time, when the United States is working diligently toward energy independence and trying to maximize renewable base load energy, the geothermal industry is unnecessarily subjected to more onerous Federal review, unnecessary delays and the resulting higher costs than other resource developments with more significant land and resource impacts.

H.R. 1363 is a first step to create a much needed Categorical Exclusion that allows geothermal drilling to proceed in a timely manner and that meets specified criteria which will help level the playing field for the geothermal industry. The proposed Categorical Exclusion is more limited than those provided for other resources and establishes, by congressional action, what the BLM should be implementing under their administrative authority and the CEQ regulations.

Thank you for considering our comments on this important issue to the geothermal industry. I am happy to respond to any questions.

H.R. 2004

U.S. Geothermal and the Geothermal Energy Association strongly support House Bill 2004, the Geothermal Production Expansion Act of 2013. Very simply, H.R. 2004 allows a developer that has taken the high risk of exploration and invested significant capital in the discovery of a commercial geothermal resource the ability to add up to 640 acres of adjoining lands administered by the Federal Government lands so that exploration and development of the geothermal resource can advance without exposing the project to the high cost of delay and speculative bidding. H.R. 2004 is an important, small policy adjustment to the geothermal leasing process that will promote the development of mixed ownership properties, help accelerate the development of our geothermal resources, create new jobs, and could potentially generate \$800,000 in additional revenue for the U.S. Treasury in the first year.

The geothermal provisions in the Energy Policy Act of 2005 were intended to support and increase the production of geothermal energy in the United States. One provision mandated a change from an open leasing system to an auction based system. These changes were implemented with the first auction of geothermal leases in 2007. Many geothermal resources in the United States are located on mixed ownership lands. The potential for speculative leasing and exorbitant lease costs associated with the Federal land reduces interest in developing the adjacent private or state parcels. The unintended consequence of the lease auction rules developed under EPACT 2005 is that some geothermal prospects are not being leased or evaluated for development because developers cannot secure the resource.

There is no specific provision in the statute that allowed for an exception to address the circumstances of intermixed private and Federal lands. We often see private surface with Federal minerals, Federal surface with private minerals, and a complete "checkerboard" of private and Federal land across the West. H.R. 2004 will correct that oversight. Fragmented ownership adds significant time and cost to a geothermal development, can reduce overall power generation from a geothermal resource, and in some instances may stop development altogether.

Under the current leasing provisions, the BLM is allowed to issue non-competitive leases under three specific circumstances; leases to mining claim holders that have a valid operating plan, direct use leases, and leases on parcels that do not sell at a competitive auction.

H.R. 2004 would create a fourth category of non-competitive lease whereby the BLM would have the authority to issue a non-competitive geothermal lease for 640 acres or less of Federal lands that adjoin a legitimate, confirmed commercial geothermal discovery, but only if those Federal lands are not already leased or nominated for lease under the auction system. The applicant must also demonstrate conclusively that the commercial geothermal discovery or reservoir extends on to the adjoining Federal lands. This bill provides a very specific, focused requirement for a geothermal developer to qualify for this proposed non-competitive lease.

The new category or condition is the same provision provided to mining claimants because it allows a developer that already has a mineral discovery and has invested a significant amount of capital to secure an adjacent parcel of interest.

This change would provide the following benefits:

- Developers that have invested substantial capital and made high risk investments would be allowed to secure a documented discovery.
- Development of the geothermal resource would accelerate the creation of jobs.
- The financing capabilities of geothermal projects would increase.
- All non-competitive leaseholders would be required to pay a fair market average "bonus" fee and thereby increase the short-term fees paid to the Federal Government.
- Increased development will provide higher revenue to the Federal Government with the payment of production royalties over decades.
- More efficient and optimal development of a geothermal resource since it allows a developer to bring the resource in to a single land package. Fragmented ownership adds significant time and cost to a geothermal develop-

ment, can reduce overall power generation from a geothermal resource, and in some instances may stop development altogether.

We believe that it is appropriate for *all* leases issued under all of the non-competitive categories to pay a filing or bonus fee set at the fair market value per acre as determined by the Secretary of Interior. If a fair market value isn't determined by the Secretary, then a fee equal to four times the median price paid at auction during the preceding year or \$50 per acre is due. This fee is fair, provides increased revenues and recipients of non-competitive leases should be required to pay for the privilege of being granted a non-competitive lease.

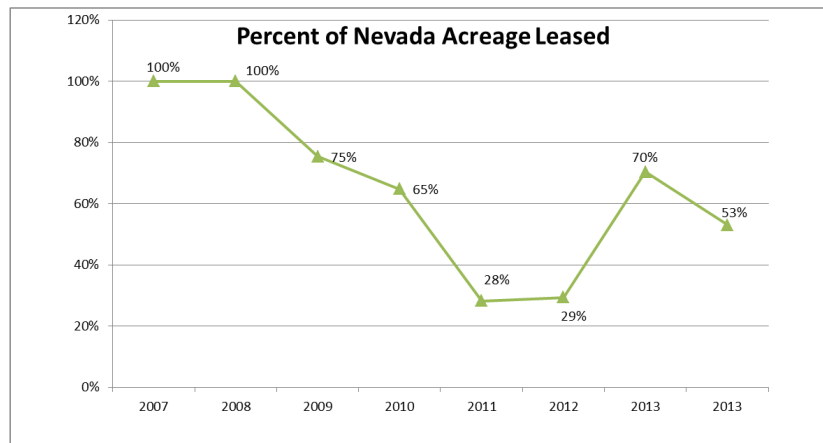
While the early years of geothermal leasing caused much excitement and some speculators paid extremely high bonus bid amounts for tracts of land, experienced developers know that there is an economic limit to the amount of capital that can be recovered when you are selling electricity into a regulated market. Geothermal development is not comparable economically to oil and gas.

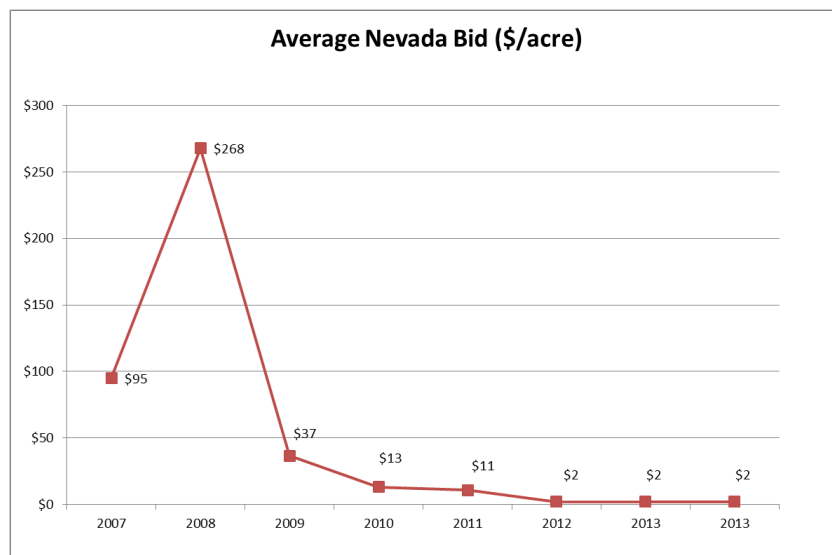
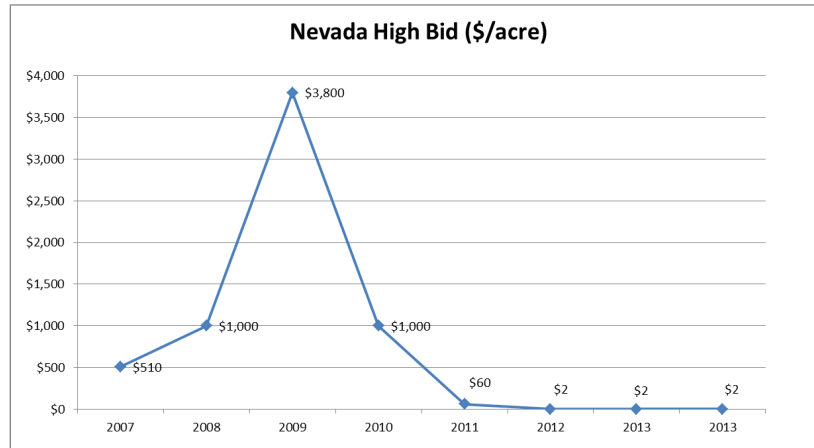
H.R. 2004 has been carefully vetted over the past 3 years, and is narrowly focused to provide a specific remedy for intermixed lands, so that when a commercial geothermal resource has been identified, it can be developed in a timely, cost-effective manner. The United States leads the world in clean, base load power generation from geothermal resources, and we would like to see us retain that preeminent position.

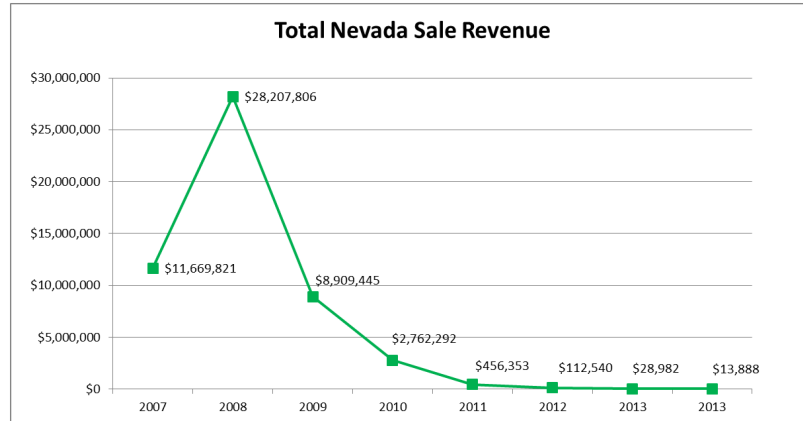
Thank you for considering our comments on this important issue to the geothermal industry. I am happy to respond to any questions.

History of Competitive Geothermal Lease Auctions in Nevada under the Energy Policy Act of 2005

Comparison and Trend of Nevada Geothermal Lease Sales								
	2007	2008	2009	2010	2011	2012	2013(1)	2013(2)
High Bid/Acre	\$510	\$1,000	\$3,800	\$1,000	\$60	\$2	\$2	\$2
Average Value /Acre	\$95	\$268	\$37	\$13	\$11	\$2	\$2	\$2
Acres Offered	122,849	105,312	323,223	328,020	151,119	94,829	10,024	6,260
Acres Sold	122,849	105,312	243,727	212,370	42,627	27,834	7,056	3,317
Percent of Acres Sold	100%	100%	75%	65%	28%	29%	70%	53%
Sale Revenue	\$11,669,821	\$28,207,806	\$8,909,445	\$2,762,292	\$456,353	\$112,540	\$28,982	\$13,888







Additional Submission

Powerpoint Presentation from the Geothermal Energy Association National Geothermal Summit held in Reno, NV on August 5 & 6, 2014, submitted for the record and is being retained in the Committee's official files.

Dr. GOSAR. Thank you very much.
Mr. Haubenstock.

STATEMENT OF ARTHUR L. HAUBENSTOCK, CHAIRMAN, UTILITY-SCALE SOLAR POWER DIVISION, SOLAR ENERGY INDUSTRIES ASSOCIATION; SENIOR COUNSEL, PERKINS COIE

Mr. HAUBENSTOCK. Good morning. Thank you, Congressman Gosar, Chairman Lamborn, Ranking Member Holt, and members of the subcommittee, for your leadership and your support of the solar industry, and the opportunity to provide testimony here today on H.R. 596. I am Arthur Haubenstock, I am Chair of the Utility-Scale Solar Power Division of SEIA, as we affectionately refer to it. We are grateful that the committee recognizes the increasingly important contributions solar is making to our energy supply, and the role that our public lands play in achieving that promise.

SEIA represents the entire solar industry, including 1,000 member companies and nearly 143,000 American citizens that the industry employs. It is a young industry, but it is growing fast. The capacity in the United States that solar now provides is the equivalent of three nuclear power plants, enough to provide power for three million homes.

In the first quarter of this year, solar comprised almost three-quarters of all new electric capacity in the United States, and almost three-quarters of that came from solar power plants, both photovoltaic and concentrating solar power. This phenomenal growth is the result of private investment, technological innovation, a maturing industry, and smart Federal and state policies, including the investment tax credit. As the impending deadline for the ITC, which is coming at the end of 2016, is creating a chilling effect

on the solar industry, we do urge that the Congress take action to change the trigger to a commence construction, rather than a placement in service trigger, which is the standard that applies to the wind industry. That is very important to continuing this immense growth for solar, and achieving the benefits of solar for the Nation.

The Federal Government has received a strong return on its investment of the public dollars, including the tax credit, and the benefits to the economy and to our environment far exceed its costs.

Solar is an energy source that benefits every U.S. Congress district, both directly through solar facilities, as well as through a supply chain that stretches from coast to coast. Its potential to serve the Nation is far greater than its growth to date. There is every reason for the United States to be a world leader in solar. Solar power plants can meet the entire country's peak needs, using a fraction of 1 percent of the Nation's land.

Right now, however, Germany is the solar resource leader. And just last month, in June, they achieved half of their energy supply from solar. That is from an area that has the equivalent solar resource of Alaska here in the United States.

The vast majority of utility-scale solar projects are built on private land, even though much of the best solar resources, and the United States does have the best solar resources in the world, both in terms of the quantity of daylight that it can provide, and also proximity to major cities and industries, is located on public land. Over a gigawatt of solar power plants are currently being constructed on public lands, although that is only 36 percent of all of the utility-scale solar power plants that are now under construction.

We are very grateful for the work of the Department of the Interior and the Bureau of Land Management on implementing their solar energy program, which is intended to try to move forward with solar projects on public land in an environmentally responsible fashion. I would particularly like to thank Neil Kornze, as the Director of BLM, and Ray Brady, who has been a tremendous leader in that regard.

And the most important step that the Department of the Interior and the Bureau of Land Management can take is to combine the Smart From the Start aspects of their program, which is trying to ensure that solar does go in the right places, and ways it can be expedited, with the permitting reforms that were taken up in 2010, as part of the Fast Track Process.

The Fast Track Process demonstrated that, without having to change the fundamental laws, the Federal and state government entities can work together in a seamless fashion when they are focused on a deadline, when they are using milestone schedules, and when they are ensuring that they take corrective action when projects fall off schedule. We are very excited about the opportunities for the Federal and state government to apply the lessons learned from both Smart From the Start and from Fast Track, the infrastructure projects, to move the country's economy forward.

We would like to very much thank Congressman Gosar for his tremendous work on H.R. 596, and we are looking forward to

working with the sponsor on improving it so that it can achieve its very important goal of trying to promote renewable energy on Federal lands, and all that it can provide to the United States.

There are some aspects that we would like to work on, particularly competitive leasing and royalty issues, which we are concerned are not ready for an innovative technology such as solar.

There are things that we think can be done to ensure that solar benefits the United States to its full potential, and we are looking forward to that opportunity.

[The prepared statement of Mr. Haubenstein follows:]

PREPARED STATEMENT OF ARTHUR HAUBENSTOCK, CHAIR OF THE UTILITY-SCALE SOLAR POWER DIVISION, SOLAR ENERGY INDUSTRIES ASSOCIATION AND SENIOR COUNSEL, PERKINS COIE LLP ON H.R. 596

Mr. Chairman, Ranking Member Holt, and members of the subcommittee, thank you for the opportunity to provide testimony on potential improvements to solar energy development on public lands. I am Arthur Haubenstein, and I serve as Chair of the Utility-Scale Solar Power Division of the Solar Energy Industries Association (SEIA). I am also a Senior Counsel with Perkins Coie, LLP, and my clients include companies developing solar projects on both Federal and private lands. I am testifying on behalf of SEIA's 1,000 member companies and the nearly 143,000 American citizens employed by the solar industry. SEIA represents the entire solar industry, encompassing all major solar technologies (photovoltaics, concentrating solar power and solar water heating¹) and all points in the value chain, including financiers, project developers, component manufacturers and solar installers. Before I begin my testimony, let me thank Chairman Lamborn and Ranking Member Holt for their leadership and support of solar energy. We are grateful that the subcommittee recognizes the increasingly important contributions to our energy supply, as well as the role that our public lands play in achieving the promise of solar energy for the benefit of the Nation.

I. INTRODUCTION

The Solar Energy Industries Association is celebrating its 40th year as the national trade association of the U.S. solar energy industry, having been established in 1974. Through advocacy and education, SEIA and its 1,000 member companies are building a strong solar industry to power America. As the voice of the industry, SEIA works to make solar a mainstream, significant energy source by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy.

Our Nation is graced with some of the world's best solar resources, in both the quality and quantity of the sunlight we receive as well as the proximity of our best solar areas to some of the country's largest cities and industries. While excellent opportunities for solar deployment exist throughout the country, much of the best solar resources are in the Southwest, and on public lands.

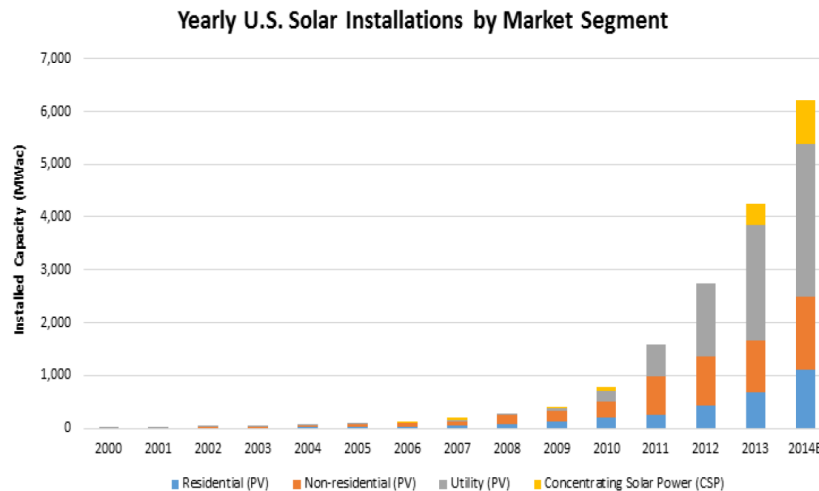
Our exceptionally rich solar resources have much to offer the Nation, its economy and its environment. Solar can contribute substantially to a clean, sustainable domestic energy supply to power growth and prosperity for many decades to come. Its prospects for doing so depend greatly on whether we properly foster this still young, but rapidly maturing, industry. Stable, long-term policies, including tax policies as well as improved permitting processes and access to the Nation's best solar resources, are the keystones to realizing solar's promise for the Nation.

H.R. 596, the Public Lands Renewable Energy Development Act of 2013, currently before the House, demonstrates the remarkable, bipartisan recognition of the tremendous value that solar offers the Nation and the commitment to make its benefits available to all Americans. This bill reflects the need to craft policies today that will provide for a clean energy future for tomorrow, one in which our energy comes from renewable, domestic sources. While we have some concerns with the details of H.R. 596, SEIA looks forward to working with the sponsors to address our concerns. We are pleased to have this opportunity to address them and other factors needed to maintain the United States as a worldwide solar leader.

¹For more information on each of these solar technologies, please see SEIA, "Solar Technology," available at <http://www.seia.org/policy/solar-technology>.

II. THE U.S. SOLAR INDUSTRY: RECENT HIGHLIGHTS AND FUTURE PROSPECTS

In recent years, America's solar industry has come a long way in converting its solar resources to the electrical energy our economy needs to thrive. Solar energy is a young industry, but it is growing fast. In the first quarter of this year, solar comprised 74 percent of all of the new electric capacity in the United States.² The vast majority of this new capacity, over 75 percent, came from utility-scale solar power plants, both photovoltaic (PV) and concentrating solar power (CSP), which collectively added approximately 1,260 MWac to the energy supply.³ Solar capacity in the United States now exceeds 12,820 MWac,⁴ the equivalent of approximately six nuclear power plants,⁵ and enough to power three million homes.⁶ The following graph illustrates solar's remarkable growth since 2000, including anticipated installations this year:



This phenomenal growth is the result of private investment, technological innovation, a maturing industry and smart Federal and state policies. The Federal Government has received a strong return on its investment of public dollars, with benefits to our economy that far exceed their costs.

Solar is an energy source available in every U.S. congressional district. Although Germany's solar resource is the equivalent of Alaska's, which has comparatively less solar potential than most other states, Germany continues to lead the world in solar installations—with a cumulative 35.7 GWp installed through 2013.⁷ In June 2014, for the first time, solar production met over half of Germany's peak demand.⁸ The United States, with its far better solar resources, could easily become the world leader.

Although solar is growing quickly, the Nation has just begun to tap into its solar resources. Solar's potential to serve the Nation is far greater than its remarkable

²SEIA, "Solar Energy Facts: Q1 2014" (June 16, 2014), a copy of which is included as Attachment 3.

³*Id.*; note that an average 85% conversion factor from DC to AC ratings was applied to reported PV statistics (using 2013 estimates from the National Renewable Energy Laboratory (NREL); see Ong et al, "Land-Use Requirements for Solar Power Plants in the United States" at p. 5 (June 2013) (hereinafter "NREL Land Use Requirements"), available at <http://www.nrel.gov/docs/fy13osti/56290.pdf>).

⁴*Id.* (see fn. 3 re: conversion factor for PV).

⁵The Duane Arnold Energy Center, for example, has a capacity of 1,912 MW; see U.S. Nuclear Regulatory Commission, "Duane Arnold Energy Center," available at <http://www.nrc.gov/info-finder/reactor/duan.html>.

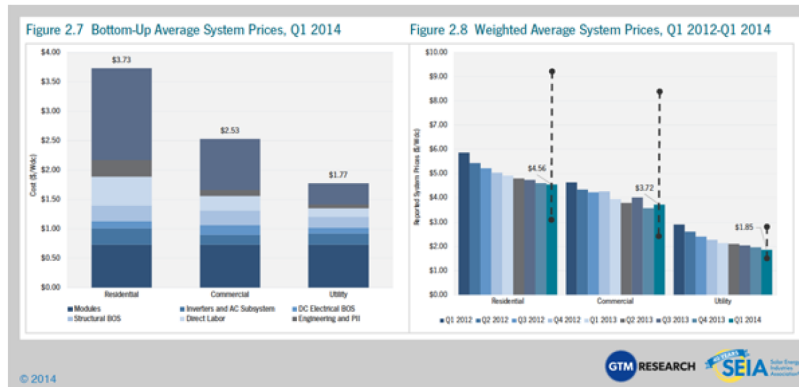
⁶SEIA, "Solar Energy Facts: Q1 2014."

⁷German Solar Industry Association, "Statistic Data on the German Solar Power (Photovoltaic) Industry" (April 2014), available at http://www.solarwirtschaft.de/fileadmin/media/pdf/2013_2_BSW-Solar_fact_sheet_solar_power.pdf.

⁸Germany Trade and Invest, "German Solar Breaks Three Records Within Two Weeks" (June 18, 2014), available at <http://www.gtai.de/GTAI/Navigation/EN/Meta/press,did=1034630.html>.

success to date. Solar power transforms the endless, free energy we receive from the sun into electric power to drive commerce, industry and our way of life, at decreasing costs; without air, water or any other emissions; and with minimal environmental impact overall. Solar power plants can provide the Nation with enough domestic, fully secure energy to meet the entire country's peak needs, using only a fraction of the solar resources available to us. The recently released annual forecast published by the U.S. Energy Information Administration (U.S. EIA) projects that through 2040, nearly 40 GW of solar capacity will be installed in this country—approximately three times the currently installed solar capacity, and nearly half of the renewable energy expected to be deployed over the same time frame.⁹ The Bureau of Land Management (BLM) reports that designated Solar Energy Zones on Federal lands alone could provide nearly 24 GW of this domestic, clean power;¹⁰ Federal lands potentially available for new zones or individual projects could provide much more. Our Nation can—and should—depend on its exceptional solar resources to power its exceptional future.

As solar provides increasing amounts of energy to the country, its costs are decreasing dramatically. As shown in the charts below, PV system prices are generally decreasing in every market segment, year-over-year.¹¹ Solar deployment is paying great dividends to the American economy and continues to act as catalyst to drive down future costs.



The solar industry relies on an increasing labor force and a host of other domestic industries throughout the country, all of which are sharing in solar's success. With increased solar deployment, both the number of direct and indirect jobs, and companies in solar's supply chain, have grown as well. For example, the supply chain for utility-scale solar power plants (see Attachment 2) stretches across 44 states, from coast to coast.

Solar offers the Nation an inexhaustible supply of energy that it can rely on to power the future, while protecting the Nation's environment and conservation values. We are grateful for the subcommittee's support for this emerging, and increasingly important, national asset.

III. SOLAR AND LAND USE: ACCOMPLISHMENTS AND OPPORTUNITIES

Solar power plants are more efficient than coal in using the Nation's land, over the plants' lifetimes, when the generation facility and all of the land needed for fuel are considered.¹² In a June 2013 report, the National Renewable Energy Laboratory (NREL) found that current utility-scale solar technology averages 8.9 acres per

⁹ U.S. EIA, "EIA Projects Modest Needs for New Electric Generation Capacity" (July 16, 2014), available at <http://www.eia.gov/todayinenergy/detail.cfm?id=17131> (summarizing U.S. EIA's projection, in its "Annual Energy Outlook 2014," that 39 GWac of the total 83 GWac of renewables in 2040 would come from solar).

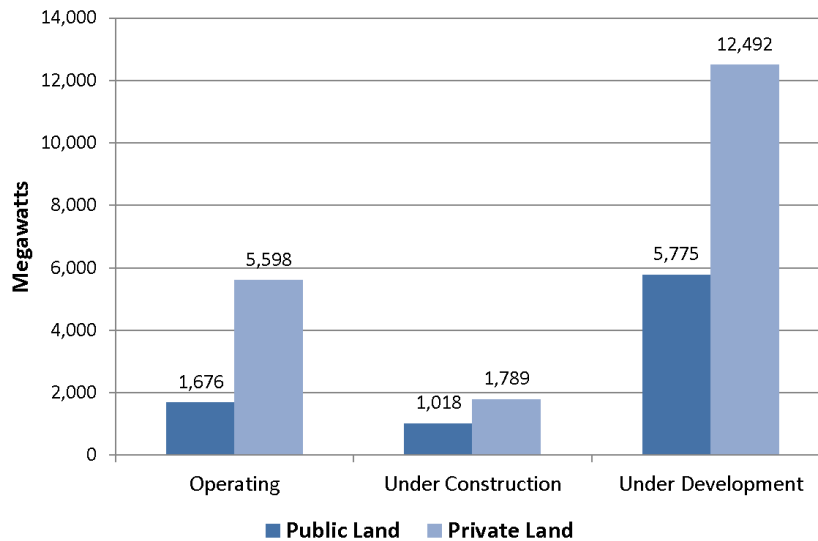
¹⁰ BLM, "Obama Administration Approves Roadmap for Utility-Scale Solar Energy Development on Public Lands" (Oct. 12, 2012), available at http://www.blm.gov/wo/st/en/info/newsroom/2012/october/NR_10_12_2012.html.

¹¹ SEIA, Solar Energy Facts: Q1 2014.

¹² Fthenakis & Kim, "Land Use and Electricity Generation: A Life-Cycle Analysis," Renewable and Sustainable Energy Reviews 13, 1465–1474, at p. 1473 (2009).

MW,¹³ meaning that the entire U.S. peak demand¹⁴ could be met with less than 0.3 percent of the Nation's land area. America can count on a small fraction of its valued land to supply the energy it needs well into the future, by using the Nation's best solar areas, much of which is located on Federal lands, and by supporting solar's continuing innovation, which is certain to increase its efficiency and reduce its land requirements.

Depending on the size of the project, the electricity purchaser, and the goals of the developer, public lands may be attractive for solar power plant siting. The relative complexity of permitting on Federal lands, and the overall expense of siting on Federal lands relative to private lands, have often led solar developers elsewhere. The vast majority of utility-scale solar projects in the United States are built on private lands. Currently, only 23 percent of operating utility-scale solar capacity is located on public lands. Another 1,018 MW of solar power plants are under construction on public lands, comprising 36 percent of all utility-scale megawatts under construction.



In October 2012, the Department of the Interior issued the Record of Decision for the Solar Programmatic Environmental Impact Statement, launching the BLM's Solar Energy Program. The Record of Decision designated 17 areas on BLM-managed lands as priorities for solar development, totaling approximately 285,000 acres. BLM also designated approximately 19 million additional acres that could be made available for solar development through "variance" applications, or through identification of new Solar Energy Zones (two of which have since been established), although far more—nearly 80 million acres of public land—was excluded from solar development.¹⁵ The Solar Energy Program is intended to provide "incentives for development within" the Solar Energy Zones, including "access to existing or planned transmission."¹⁶

At present, the promised incentives remain a work in progress. Perhaps the most important step that the Department of the Interior could take, working with other Federal and state agencies, is to adopt the most successful aspect of the "fast track"

¹³ NREL Land Use Requirements at p. 17.

¹⁴ Approximately 768 GW; see U.S. EIA, "Electric Power Annual 2012" (Dec. 2013), Table 8.6.A., "Noncoincident Peak Load by North American Electric Reliability Corporation Assessment Area, 2002–2012, Actual," available at <http://www.eia.gov/electricity/annual/pdf/epa.pdf>.

¹⁵ U.S. Department of the Interior, "Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States," available at <http://www.doi.gov/news/loader.cfm?csModule=security/getfile&pageid=321960>.

¹⁶ BLM, "Fact Sheet: Renewable Energy: Solar" (updated May 2014), available at http://www.blm.gov/pgdata/etc/medialib/blm/wo/MIN-ERALS_REALTY_AND_RESOURCE_PROTECTION/_energy/solar_and_wind.Par.99571.File.dat/fact_Solar.pdf

renewable energy program applied to renewable energy projects in 2010. That process demonstrated Federal and state agencies could promptly and efficiently assess permit applications when working with clear and agreed-upon deadlines, adopting milestone schedules subject to both strategic and tactical oversight as well as corrective action when schedules appeared to slip, and being held accountable to the highest levels of each agency. In the absence of clear deadlines and a high level of commitment, the permitting process cannot attain that high level of effectiveness.

Another effort underway, for which BLM is to be commended, is its regional mitigation program. Piecemeal mitigation undertaken individually by each developer is inefficient, expensive, and less likely to be useful to the species intended to benefit from mitigation than comprehensive solutions. Initial regional mitigation attempts have appeared to be more expensive than other options available to renewable energy developers, and may threaten to provide a disincentive, rather than an incentive, to develop in Solar Energy Zones. Aggregating mitigation requirements should provide economies of scale that decrease costs, and care must be taken to ensure that regional mitigation efforts serve both species and development needs, perhaps by considering use of private land trusts and other innovative means of achieving regional mitigation's multiple goals.

Access to transmission linking solar energy development areas to major electricity demand centers continues to be a gating item for solar development, whether in or outside of Solar Energy Zones. Transmission access to major demand centers is one major factor that differentiates the De Tilla Gulch and Los Mogotes East Solar Energy Zones in Colorado, where BLM's first attempt to hold competitive auctions for solar development failed,¹⁷ from the Dry Lake Solar Energy Zone in Nevada, where BLM's second competitive auction attempt appears to have been successful. Other issues undoubtedly factored into these starkly different results, such as the demand for additional renewable energy in nearby markets, but there can be no doubt that successful solar development requires prompt, reliable permitting of adequate infrastructure, and cannot be successfully developed without it.

SEIA remains engaged with the BLM on the development of the Solar Energy Program and hopeful that the promised incentives for development in Solar Energy Zones—as well as the flexibility to develop in the many prime solar resource areas outside of those zones—will become permanent features of the program.

IV. MAKING THE MOST OF THE NATION'S EXCEPTIONAL SOLAR ASSETS: POLICY PRIORITIES

As with any industry, and particularly an emerging one, long-term policy certainty is critical to solar achieving its potential. Increased investment, innovation, and deployment are needed for the solar industry to continue to reduce costs and attain its potential as one of the largest contributors to our Nation's energy supply. A steady tax policy, providing comparable treatment with other renewable technologies and avoiding "cliff" dates that stop investment cold long before programs actually expire is essential. For this reason, SEIA strongly advocates adoption of a "commence construction" eligibility standard for the solar Investment Tax Credit (ITC).

The ITC has been a major contributor to the rapid growth of the solar industry. In spite of the national economic downturn, solar installations have grown by 3,000 percent since the ITC took effect in 2006, a compound annual growth rate of 77 percent. As financiers require substantial schedule margins to avoid risk of losing tax benefits, however, the statutory deadline for the ITC is already casting a shadow on solar growth.

To qualify for either the Section 45 Production Tax Credit (PTC) or the Section 48 ITC, all renewable energy facilities had been required to be "placed in service"¹⁸ before a statutory deadline. The American Tax Relief Act of 2012 (ATRA) changed the eligibility standard for certain renewable energy technologies¹⁹ under Section 45 of the tax code, allowing projects using those technologies to qualify for the PTC, so long as the projects "commence construction" prior to the expiration of the tax credit. Notably, this legislation did not encompass solar energy, fuel cells, combined heat and power, or microturbine property. The "commence construction" modifica-

¹⁷Montgomery, "BLM Reloading After Colorado Solar Land Auction No-Shows," *Renewable Energy World* (Oct. 29, 2013), available at <http://www.renewableenergyworld.com/rea/news/article/2013/10/blm-reloading-after-colorado-solar-land-auction-no-shows>.

¹⁸*I.e.*, the facility was required to be complete and capable of generating power substantially equal to its nameplate capacity.

¹⁹These technologies include wind; open- and closed-loop biomass; geothermal; small irrigation power; municipal solid waste; hydropower; marine and hydrokinetic energy.

tion passed in ATRA should be applied to all Section 45 and 48 clean energy incentives, regardless of technology.

Ensuring a consistent “commence construction” trigger for clean energy tax incentives is especially urgent for utility-scale solar projects. Analysis of the dozen largest solar projects expected to be online by 2016 reveals the median time from the early steps of development to commencement of construction is just over 3 years, and the median time from development to commercial operation is nearly 6 years. A “commence construction” standard would ease timing pressures on developers by 2 years or more, pressures that are building now as the ITC deadline looms at the end of 2016. This tax policy improvement would certainly drive the installation of an additional solar capacity that might otherwise not occur.

The Public Lands Renewable Energy Development Act of 2013

Stable, appropriate policies encouraging solar deployment on Federal lands, such as aspects of the Public Lands Renewable Energy Development Act of 2013 and, if properly implemented, the BLM’s Solar Energy Program, are also needed to ensure the Nation is making the most of its solar prospects. The commitments and compromises embodied in the Solar Programmatic Environmental Impact Statement process, including enhancing project development prospects in Solar Energy Zones as well as access to other appropriate development areas (referred to as “variance” lands), must be carried through if the Nation is to receive the full benefit of its outstanding public solar resources. Permitting improvements for both solar projects and the transmission needed to bring its power to American homes and businesses must be institutionalized if we are to realize solar’s potential on public lands.

First, we support the following elements of H.R. 596:

- **Revenue sharing with states and local government.** While solar development provides many net benefits to the communities hosting solar plants, and provides a substantial net environmental benefit overall, no development is without any impact. We agree that a portion of the revenues from solar development on Federal lands should be directed to the states and local communities hosting solar power plants, which will help ensure that all fully share in the benefits solar development brings to the Nation. We applaud efforts to fund increasing conservation and recreation needs on Federal lands, but caution against burdening renewable energy with the costs of doing so, particularly in isolation. To the extent that monies from the solar industry are paid into a conservation fund, care must be taken to account for those contributions when determining the mitigation requirements for solar power plants.
- **Improved Permitting Processes.** With appropriate funding and prioritization, the “fast track” projects demonstrated that permitting processes can be timely and effective. High-level interagency coordination across Federal and state governments, milestone schedules with clear deadlines, corrective action when necessary, high-level accountability and transparency are all necessary elements to permitting success. Focusing funding to institutionalize improved permitting processes is not only appropriate; it is a good investment for improved returns for the public.

We remain concerned about the certain elements of the Public Lands Renewable Energy Development Act of 2013, including the following aspects, and look forward to working with the sponsors to tailor these provisions to better ensure solar benefits to the Nation:

- **Competitive Bidding is Counterproductive for an Emerging Industry.** Competitive bidding works best with fully mature industries, where multiple well-established companies can drive costs down by making existing practices more efficient, allowing some of the benefits of those efficiencies to be shared with the landowners—in this case, the Federal Government. Competitive bidding is not well-suited to an early stage industry like utility-scale solar, as it encourages incumbent technologies and speculators and discourages the innovation that could ultimately reduce costs for energy customers, increase solar production from Federal lands while decreasing land requirements, and provide far greater benefit to the public than could be realized by competitive bidding revenues. Competitive bidding would most likely increase the costs of developing utility-scale solar projects on public lands, and thereby decrease opportunities for innovation that will help make the most of the public lands that are used for renewable energy. Combined with high rental rates, bonds, and other costs, some developers that might have pursued projects on public lands will pursue projects on private lands or not at all.

Recent experience with competitive bidding could not be more varied, with one experiment in Colorado yielding no bidders and a second, in Nevada, yielding apparent success. If competitive bidding is to be pursued, the pilot project approach in the bill is essential to determine whether it can truly work on a sustainable basis, and if so, what factors lead to success or failure. It is essential that any pilot program is not overly prescriptive, allowing the BLM the flexibility to build on success and eliminate factors that deter from it, based on its own analysis as well as feedback from the solar industry. Most importantly, BLM should allow itself the flexibility to continue its current solar permitting regime while any competitive bidding program is evaluated. If the pilot project is considered unsuccessful, BLM should retain the ability to reject the use of competitive bidding and to rely on technical and financial criteria to decide among competing applications.

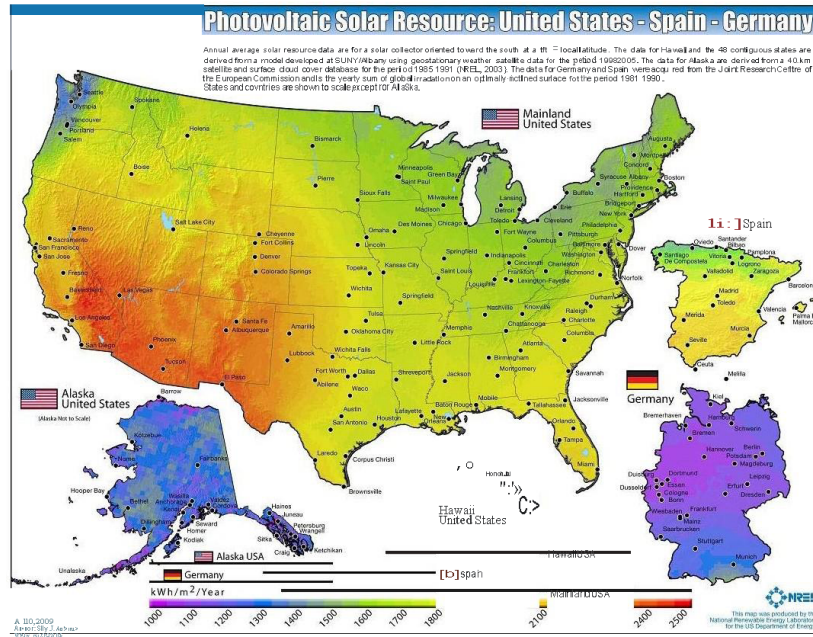
- **Readjustment of Lease Terms Introduces Unfinanceable Risk.** The proposal to open lease terms for renegotiation 15 years into a 25-year lease is simply not financeable. Financiers need certainty of sufficient revenues throughout the term of debt financing to ensure repayment. The potential that increased lease costs could eat into revenues by unknown amounts would create unconstrained risk. To ensure financeability of solar power plants and avoid unnecessary risk, which increases costs to electricity consumers, lease terms should remain consistent for the duration of the lease (typically 30 years for a solar right-of-way, which is commensurate with long-duration power purchase agreements).
- **Royalties payments.** No royalty payments should be required, regardless of whether competitive bidding is adopted. Solar energy generation does not result in the depletion of the resource, which is the economic rationale for imposing a royalty. Increased solar production from Federal lands should be incentivized, not penalized. Royalties charged on an output basis, particularly using a flat percentage, decreases the incremental value to solar developers of maximizing solar generation per acre. Existing rental values for Federal lands have already contributed to make those lands less favorable than private lands, and switching to a royalty system could further reduce solar production from Federal lands and ultimately provide less, not more, solar revenue for the Federal Government.

IV. CONCLUSION

Thank you once again for inviting SEIA to submit this testimony. SEIA is grateful for the tremendous support that solar has across the Nation, which is reflected in the great interest and extensive efforts of this subcommittee. We look forward to working with the subcommittee to establish the long-term, stable policies needed to make the most of America's exceptional solar assets, delivering solar's benefits to the Nation in the form of large quantities of cost-effective, clean and sustainable power, growing numbers of jobs throughout the country, and outstanding economic opportunity.

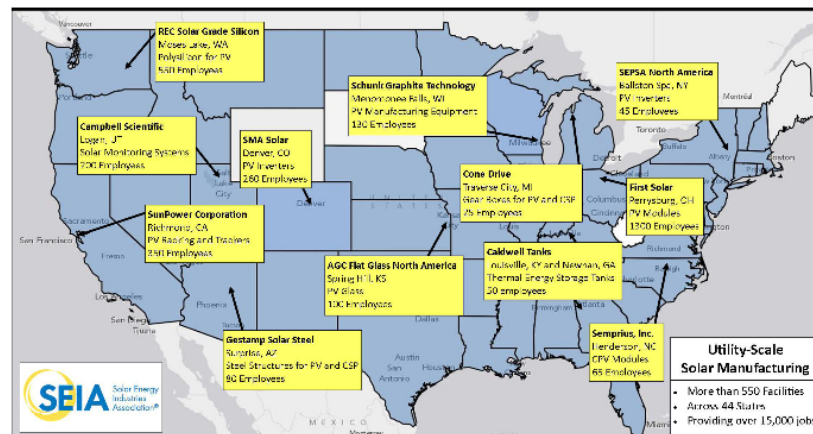
ATTACHMENT 1

Map of U.S. Solar Resources Compared to Germany and Spain



ATTACHMENT 2

Utility-Scale Solar Manufacturing: A Coast-to-Coast Supply Chain





SOLAR ENERGY FACTS: Q1 2014

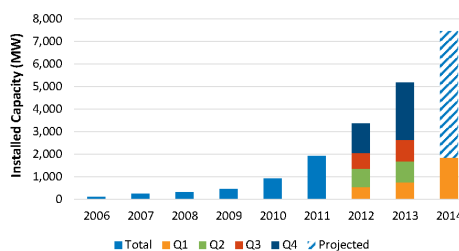
U.S. SOLAR MARKET INSTALLS 74% OF ALL NEW ELECTRIC CAPACITY IN Q1

The solar industry picked up in 2014 where it left off in 2013, installing 1,330 MW of photovoltaics (PV) in the first quarter to grow 79% over Q1 of last year. The concentrating solar power (CSP) market enjoyed its largest quarter on record, with installations totaling 517 MW. In total, the solar industry accounted for 74% of all new electric capacity added to the grid in Q1. The growth was led primarily by the utility sector, which installed nearly 873 MW of PV to more than double the amount of utility capacity installed in Q1 of 2013. (All data from SEIA/GTM Research "U.S. Solar Market Insight: Q1 2014" unless otherwise noted.)

Installations Continue To Boom

- There are now 14,800 MW of cumulative solar electric capacity operating in the U.S., enough to power more than 3 million average American homes.
- There are now over 480,000 solar installations in the U.S. In 2014, a new solar installation is expected to come online every 2.5 minutes.
- The utility market led the charge again with 873 MW of PV and 517 MW of CSP installed in Q1 2014.

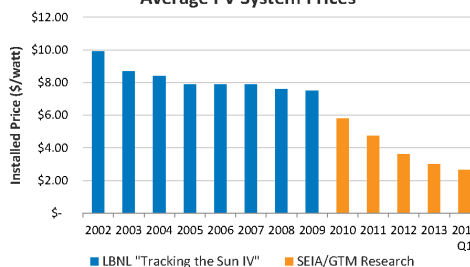
New U.S. Solar Electric Installations

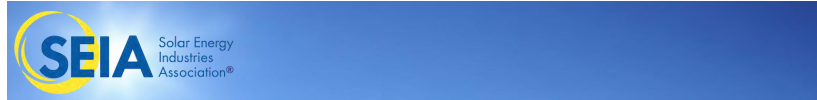


Solar More Affordable Than Ever

- Year-over-year, the national average PV installed system price declined by 22% to \$2.64/W in Q1.
- Since the beginning of 2011, the average price of a PV panel has dropped by 59%.
- While these price declines are beneficial for solar end-consumers, the rapid fall in prices, due in part to a global oversupply situation, has put a significant strain on manufacturers.

Average PV System Prices

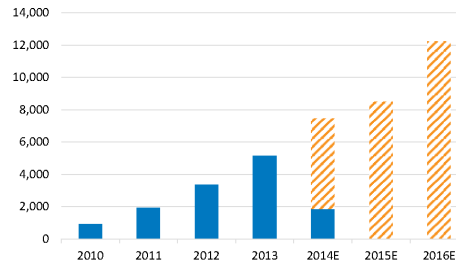




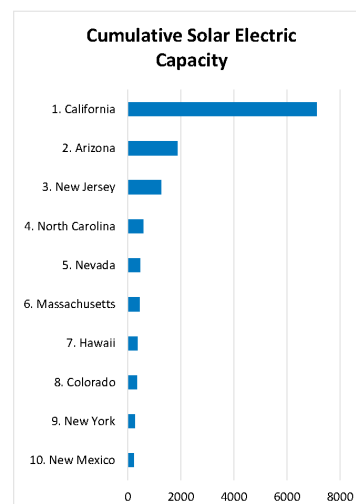
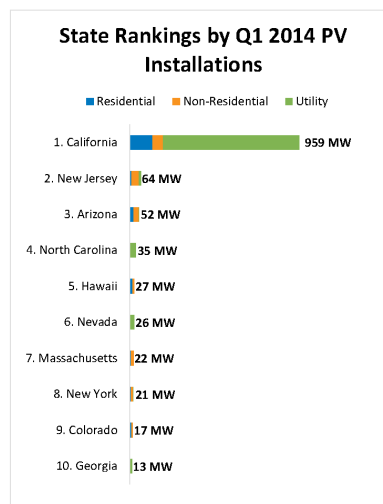
Record Growth to Continue

- Over 6,600 MW of PV is forecasted to come online in 2014, representing 39% growth over 2013's record installation levels.
- 2014 will be a record year for CSP as 857 MW is expected to be commissioned by year's end.
- Together, the new solar electric capacity projected to be added in 2014 will generate enough clean energy to power over 1.5 million average American homes.

U.S. Solar Installation Forecast



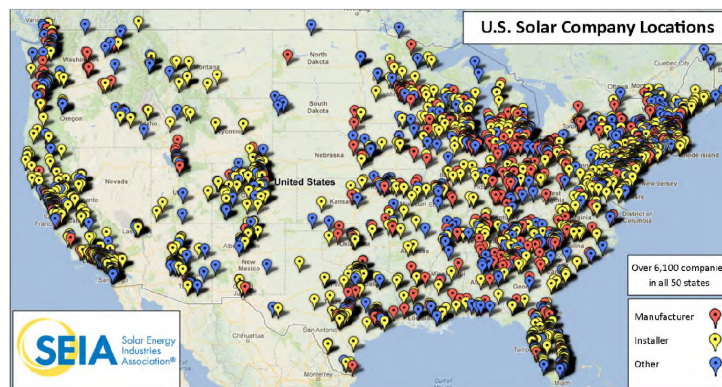
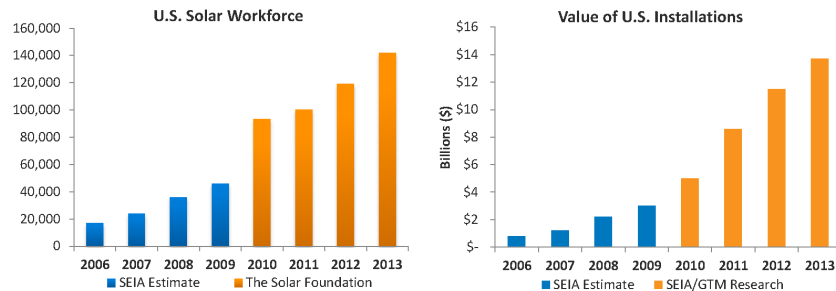
State Rankings





Solar Is an Economic Engine

As the solar industry grows, so does its benefit to the economy. There are now nearly 143,000 solar workers in the U.S., a nearly 20% increase over employment totals in 2012.¹ These workers are employed at 6,100 businesses in every state. The increasing value of projects has injected life into the U.S. economy as well. In 2013, solar installations were valued at \$13.7 billion, compared to \$11.5 billion in 2012 and \$8.6 billion in 2011.



¹The Solar Foundation "National Solar Jobs Census 2013"



Established in 1974, the Solar Energy Industries Association® is the national trade association of the U.S. solar energy industry. Through advocacy and education, SEIA® and its 1,000 member companies are building a strong solar industry to power America. As the voice of the industry, SEIA works to make solar a mainstream and significant energy source by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy. www.seia.org

SEIA | www.seia.org

June 16, 2014

QUESTIONS SUBMITTED FOR THE RECORD TO ARTHUR HAUBENSTOCK

Question 1. Mr. Haubenstock, if you don't support a competitive system, what system do you prefer to ensure that the American people are getting fair market value for the use of their public lands for solar plants?

Answer. SEIA has previously expressed its concerns about a competitive leasing program, both to BLM and to Congress. In its comments in response to BLM's Advanced Notice of Proposed Rulemaking, a copy of which is attached, SEIA explained its overriding concern that competitive bidding for this nascent industry will most likely increase the cost of developing utility-scale solar projects on public lands, therefore decreasing the likelihood of continued solar deployment on those lands and thwarting many public policy goals for renewable energy development.

Competitive bidding works best for well-established industries and those with relatively low capital costs. For solar power plants, virtually all of the costs are “up-front” capital costs, with no fuel costs throughout their operating life. Solar is also undergoing extraordinary innovation, increasing the amount of energy that can be produced from a given area of land while reducing costs and increasing speed of development. Innovation, however, carries with it significant risk. Competitive bidding adds significant risk, particularly as the specific qualities of an area of land and its ability to sustain solar development of sufficient size to merit the costs are generally not known at the time of bidding. For private land, in contrast, developers will usually enter into an option agreement with a landowner, allowing the developer to assess the land and its ability to sustain sufficient solar development to merit moving forward with the project. The increased risk associated with uncertainty diminishes the incentive—and the ability—for solar developers to innovate, as there is only so much risk that a developer can take on. Competitive bidding thus favors technologies that may not offer as much to forwarding the Nation’s progress in providing a significant portion of its power from renewable sources, or to developing a world-leading renewable energy industry. We are also concerned, as has happened with other nascent industries, that a competitive process may fuel speculation rather than reward serious developers.

SEIA has recommended that BLM continue to use its authority to issue rights-of-way instead of adopting competitive bidding. Under this proposal, solar developers would pay for the use of public lands in accordance with the rental rates BLM has already established. It is worth noting that BLM collects rents for dozens of other uses of public lands via right-of-way assessments, such as roads, pipelines, transmission lines, and communication sites.¹

Question 2. Mr. Haubenstock, how do states or private landowners receive compensation from solar plants on their land? Are there fixed rentals, royalties, up-front payments, or some other scheme?

Answer. Many financial arrangements with private landowners consist of two phases: a short-term option and either a long-term lease or a land purchase. During the option phase, a developer pays the landowner for the right to lease or buy the land for solar development in the future, say 3 years’ hence. During those 3 years, the landowner promises not to sell or lease the land to another interested party. The solar developer uses that time to determine if all of the conditions needed for successful development could be met at that location, including insolation, transmission, soil and environmental conditions, and other factors. If, at the conclusion of the option, the developer wishes to develop the parcel, it would then enter into a long-term lease with the landowner or purchase the land. Solar development leases typically specify the price per acre and the term of the lease. No royalties are generally paid to the landowner; no “megawatt capacity fees” exist, as they do under the BLM rental regime.

Among the states, the payment schemes vary. In Arizona, for example, state trust land is made available for lease through an auction. The Arizona State Land Department conducts an appraisal of the property and interested parties must pay at least the appraised value to secure rights to the site. The winner gets the rights to the site for a previously specified term. (In the case of Arlington Valley Solar Energy, LLC, the term is 35 years.) In Colorado, the State Land Board generally offers leases to solar developers. The developer often pays a base rent plus a percentage of their electricity generation revenues. Colorado is willing to enter into revenue-sharing arrangements with the developer, collecting a fixed percentage of the electricity sales and thus taking on some risk if the sales volume or price of electricity falls.

¹ According to BLM, there are approximately 96,000 right-of-way authorizations on the public lands, of which over 45,000 are subject to the rental fee schedule for linear rights-of-way. (See Linear ROW Schedule: Final Rule—Questions and Answers, 10/31/2008, at http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION/_cost_recovery.Par.82100.File.dat/ROW_Final_Rule_QA_103008.pdf.)

ATTACHMENT

PERKINS COIE,
WASHINGTON, DC,
FEBRUARY 27, 2012.

VIA INTERNET
The Honorable Robert V. Abbey
Director
Bureau of Land Management
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

Re: Comments on Advance Notice of Proposed Rulemaking Regarding a Competitive Process for Leasing Public Lands for Solar and Wind Energy Development

Dear Mr. Abbey:

The Bureau of Land Management (BLM) has published an Advance Notice of Proposed Rulemaking Regarding a Competitive Process for Leasing Public Lands for Solar and Wind Energy Development. 76 FR 81906 (December 29, 2011) (ANPR). BLM published the ANPR to solicit public comments that will be helpful to it in developing a proposed rule providing for a competitive bidding process. We appreciate the tremendous amount of work BLM and the Department of the Interior have devoted to permitting utility-scale solar power projects over the last three years. As we look to continue the record of successful solar power plant development on public lands, SEIA must oppose this proposal to establish a competitive bidding process for solar right-of-way (ROW) applications for the reasons outlined below.

The Solar Energy Industries Association (SEIA) is the national trade association of the U.S. solar energy industry. Through advocacy and education, SEIA is building a strong solar industry to power America. As the voice of the industry, SEIA works with its 1,100 member companies to make solar a mainstream and significant energy source by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy. Accordingly, SEIA has a strong interest in the issue of competitive leasing for solar energy projects.

In short, competitive bidding will most likely increase the costs of developing utility-scale solar projects on public lands, and thereby decrease opportunities for innovation that will help make the most of the public lands that are used for renewable energy. Combined with high rental rates, bonds, and other costs, some developers that might have pursued projects on public lands will pursue projects on private lands or not at all. Instead of promoting the efficient use of public lands to achieve national and state renewable energy objectives, competitive bidding would stymie those efforts, in direct conflict with Presidential and Secretarial orders and statutory goals, as discussed below. SEIA firmly opposes BLM's proposal to establish a competitive bidding process for solar right-of-way (ROW) applications.

SEIA strongly recommends that, instead of competitive bidding, BLM continue to use the financial and technical capability criteria it adopted in 2011 (see BLM Instruction Memorandum (IM) No. 2011-060)¹ to select among competing applications. Where applicants are considered to be equal in their capabilities under these criteria, BLM should process the earliest application filed. Finally, SEIA supports the issuance of a lease to solar developers, rather than a right-of-way grant, if BLM is proposing such a change.

I. Background

More than 100,000 Americans are employed by the solar industry at over 5,000 businesses (many of them small businesses) in all 50 states.² In fact, the solar industry is one of the fastest growing industries in the country.³ Solar energy capacity installed in the U.S. now exceeds 4,400 megawatts, enough to power more than 650,000 American homes.

This phenomenal growth is the result of private investment, technological innovation, a maturing industry and smart federal and state policies. The federal govern-

¹ Instruction Memorandum 2011-060, "Solar and Wind Energy Applications—Due Diligence," February 7, 2011 ("IM 2011-060") available at [http://solareis.anl.gov/documents/docs/IM2011-060 Solar and Wind Due Diligence.pdf](http://solareis.anl.gov/documents/docs/IM2011-060%20Solar%20and%20Wind%20Due%20Diligence.pdf).

² 2011 *Jobs Census Topline* at <http://www.thesolarfoundation.org/sites/thesolarfoundation.org/files/2011%20Jobs%20Census%20Topline%20Release%20FINAL.pdf>.

³ *U.S. Solar Market Insight: 2nd Quarter 2011*, available at <http://www.seia.org/galleries/pdf/SMI-Q2-2011-ES.pdf>.

ment has received a strong return on its investment of public dollars, with benefits to our economy that far exceed their costs.

The last few years have also been noteworthy for the Bureau of Land Management's (BLM) solar efforts: it issued the first sixteen permits for construction of utility-scale solar power projects or associated transmission lines on public lands in the entire history of the agency. Today, work is underway at these and other utility-scale solar power plants under construction in the Southwest, employing hundreds of workers from the region. In addition, the supply chains behind each of those facilities are turning out highly reflective mirrors, precision-crafted receiver tubes, steel posts and thousands of other components across the United States.

This proposal to institute competitive leasing for solar energy projects on public lands jeopardizes the continued growth of the solar industry and its supply chain and would thwart the nation's move to an economy powered by clean energy.

II. Competitive Bidding Is Inappropriate for Solar Energy Resources

Competitive leasing is often useful in determining fair market value of certain commodities and services, but none of the circumstances in which competitive leasing is useful are present for the leasing of public land for solar energy projects.

A. Competitive Bidding Is Useful Where Market Value Cannot Otherwise Be Priced

Competitive bids are useful to establish a market value for a product or service that cannot otherwise be priced. In the natural resources arena, the federal government has successfully used competitive bidding for certain commodities, such as for oil and gas leasing, where the pre-lease market value of the resource is essentially unknown. The value of an oil and gas lease prior to any drilling is determined by geological and geophysical studies that are subject to interpretation by both the bidders and the lessor, and these interpretations can vary widely. Competitive bidding allows the lessor to capture the value of the bidders' most favorable interpretation of the geological and geophysical studies.

Using competitive bidding to determine the value of solar energy resources does not fit this traditional model. The value of solar energy sites is determined by the amount of solar radiation reaching a site, i.e., insolation, the slope of the land, access to transmission and other known factors. Essentially, there is nothing unknown about the value of the energy-generating resource for a given solar site. (To be sure, the cost of managing conflicts with other resources may be unknown for solar energy sites, but the same is true of oil and gas leases.) The result is that there is little or no interpretation value that the government can leverage through a competitive leasing system. Given the known resource values at solar energy sites, rental payments are the customary vehicle for obtaining fair market value.

An economist would say, theoretically, if all bidders had the identical information they would all bid identically. In reality, even with the identical information different solar companies might bid differently depending upon the technology they intend to implement or the price at which the electricity is being sold. Some technologies are cheaper than others or produce electricity more efficiently. But different technologies have different environmental impacts, and assessment and mitigation of environmental impacts are critical to solar energy project siting. Either BLM would identify a particular technology for a site, in which case all bidders again have the same information or BLM would allow solar energy companies to bid based upon their own technologies, in which case environmental impacts could not be fully assessed until a winning bidder is selected. The first scenario suggests that competitive bidding is inappropriate; the second scenario puts bidders in a risky position of not knowing the ultimate expense of mitigation until well after they have committed to a bid.

This risk factor is especially evident in the solar energy industry. Unlike a mature industry, such as the oil and gas industry, where a company can absorb a certain degree of risk in establishing a leasing portfolio, the solar energy industry works on much tighter margins. This is particularly true for innovative technologies that may better meet federal goals for renewable energy, but which have even tighter margins and do not have the ability to absorb additional risk beyond that associated with commercializing a new technology. Moreover, the real costs involved in siting a solar energy project on public lands are just beginning to become evident. The irony presented by competitive bidding is that entities most likely to assume greater risk in structuring a bid are placing themselves at a greater risk of being unable to complete the solar project successfully.

B. Competitive Bidding Is Useful for Procurement

Competitive bidding is used in the procurement of electricity. A utility will put out a request for proposal (RFP) looking for the lowest-cost electricity provider that meets a certain generation profile. Competitive bidding is inappropriate for siting

solar energy projects because the government is not purchasing electricity. It is leasing land. Moreover, BLM would be seeking the highest bidder for the solar energy site, not the lowest bidder as would a utility.

Competitive bidding is appropriate for federal procurement because it enables the government to obtain goods and services at the lowest prices by stimulating competition. But this factor is inapplicable for siting solar energy projects. The government is not procuring goods and services. It is renting real property with a known resource value. Again, BLM would be seeking the highest bidder, not the lowest.

III. Competitive Bidding Will Be More Costly and Is Inappropriate for a Newcomer to the Electricity Market such as Solar Energy

Even if competitive leasing were a valid approach for leasing solar energy sites, competitive leasing *at this time* is inappropriate for a newcomer to the electricity market such as solar. BLM must not lose sight of the big picture: solar competes in the wholesale electricity marketplace for power purchase agreements with utilities. Increased land costs will directly result in increased prices for solar-generated electricity, which means a solar plant will be less likely to win a contract with a utility to provide wholesale electricity.⁴ At a time when conventional electric generation appears to be trading at a reduced price, the additional financial stress of competitive bidding would frustrate efforts to make solar a significant part of the nation's electric generation portfolio.

IV. Competitive Bidding Undermines Administration Goals and Works at Cross Purposes with Other Federal Programs

Congress and the Administration have recognized the value that solar energy brings as part of a diverse energy marketplace and has enacted policies to reduce the price of solar and increase its domestic deployment.⁵ Establishing a competitive leasing system would work at cross purposes with other federal programs by imposing an additional cost for solar energy sites on public land.

Implementing a competitive leasing system now would also interfere with implementation of the mandates of:

1. Executive order 13212, "Actions to Expedite Energy-Related Projects," 66 Fed. Reg. 28357 (May 22, 2001), mandating that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
2. The Energy Policy Act of 2005 (EPA 05), which sets forth the "sense of Congress" that the Secretary of the Interior should seek to have approved non-hydropower renewable energy projects on the public lands with a generation capacity of at least 10,000 MW by 2015.
3. Secretarial Order 3285A1, dated March 11, 2009 and amended on Feb 22, 2010, which "establishes the development of renewable energy as a priority for the Department of the Interior."

Moreover, it would be contrary to the principles espoused by the President in his January 24, 2012, State of the Union address. Rather than pursue competitive bidding, BLM should focus on policies that enable the solar industry to contribute even more toward achieving these Presidential, Secretarial and statutory objectives.

V. Competitive Bidding Has the Strong Potential to Lengthen and Complicate Siting a Solar Project

Siting a solar energy project on public land is already an extremely cumbersome process. Competitive leasing has the strong potential to lengthen and complicate siting a project, thereby increasing costs and the resulting price of electricity generated by solar power plants. This will make solar energy less competitive compared to other fuel sources and reduce the number of megawatts of solar developed on public lands, which is counter to the goal the President laid out in his State of the Union address.⁶

In fact, how solar energy projects will be permitted on public lands is still in flux. BLM has not yet finalized its solar Programmatic Environmental Impact Statement ("Solar PEIS"), which will establish the rules for permitting of solar energy projects

⁴While it is possible that a site may be less expensive for the winning bidder than today's rental rates, presumably BLM anticipates that competitive bidding will fetch a higher price for the land, thus increasing production costs for solar-generated electricity.

⁵Such policies include the solar Investment Tax Credit (ITC), the federal loan guarantee program and the Department of Energy's SunShot Initiative.

⁶State of the Union Address (January 24, 2012), wherein President Barack Obama "direct[ed] his] administration to allow the development of clean energy on enough public land to power 3 million homes."

in the future. Until the final Solar PEIS is issued, it will be difficult to assess and understand the complexities a competitive leasing system may impose upon the siting process. Creating a new system for the solar industry and the public to adjust to will only slow solar deployment, and may even result in little or no solar development on public lands, due to costs and complications.

VI. Competitive Bidding Is Not an Effective Tool to Weed out Speculators

BLM has expressed concerns about speculative applications being filed for renewable energy projects (See, e.g., Supplement to the Draft Solar PEIS, p. 2–4). However, competitive leasing will not effectively address the problem of speculators tying up land. BLM has ample existing authority to weed out speculative applicants. IM 2011–060 has proven highly effective against speculation. More broadly, Section 505 of FLPMA provides:

The Secretary concerned shall grant, issue, or renew a right-of-way under this title only when he is satisfied that the applicant has the technical and financial capability to construct the project for which the right-of-way is requested, and in accord with the requirements of this title.

43 U.S.C. 1764(j). BLM has been meeting this standard for the last 35 years. There is nothing to indicate that competitive bidding is needed to resolve any existing problem BLM has in complying with this requirement.

Indeed, the California BLM has done just that, eliminating dozens of pending applications from its queue in 2011 by applying IM 2011–060. We reiterate our call for other BLM offices in the West to do the same.

Moreover, BLM has already established financial and technical criteria for accepting applications for solar energy sites. While these financial and technical criteria could be improved, BLM should continue to use these types of criteria to select among applicants for sites upon which there is more than one application.

Ironically, prioritizing a bidder's ability to pay over other factors necessary to bring a project to fruition may result in more speculation, not less, and fewer solar megawatts being developed on public lands. A developer with deep pockets but little interest or ability to complete a solar project would be able to secure the land and block access to others with economically sound and technically viable solar power plants.

VII. FLPMA Does Not Mandate Competitive Bidding

The ANPR cites section 102(a)(9) of FLPMA as mandating that “the United States receive fair market value of the use of public lands and their resources . . .” 43 U.S.C. 1701(a)(9). Nothing in this language requires BLM to institute competitive bidding for solar energy resources. Section 102 of FLPMA is in fact only a declaration of policy and not a strict legal requirement. *See* 43 U.S.C. 1701(b) (“The policies of this Act shall become effective only as specific statutory authority for their implementation is enacted by this Act or by subsequent legislation . . .”) Moreover, BLM has been successfully accomplishing this policy with respect to nearly every grant of right-of-way for the last 35 years without reliance on competitive bidding, and there is no particular reason to think that existing policies would fail for solar energy rights-of-way. Indeed, if BLM takes the position that competitive bidding is the only way to attain fair market value, BLM's practices would be called into question for a wide variety of uses.

In addition, this proposal conflicts with provisions of BLM's existing rules and policy. Competitive bidding is in conflict with BLM policy that calls for fees set according to “comparable payment practices for existing wind energy right-of-way authorizations on federal and non-federal lands.” BLM Instruction Memorandum (IM) No. 2009–043 (Dec. 19, 2008).⁷ Existing practices for federal and non-federal land do not involve competitive bidding. Further, BLM's competitive leasing proposal does not explain or justify variation from the language in 43 C.F.R. § 2806.10, which does not provide for competitive bidding process unless that process is based on sound business and comparable commercial practices.

VIII. At a Minimum, Competitive Bidding Should Be Deferred

As explained above (See Section III), the solar energy industry is a relative newcomer to the wholesale electricity market. If BLM chooses to implement a competitive leasing system, it should not implement such a program until the solar industry has reached maturity and wholesale solar electricity is cost-competitive with fossil

⁷ Although IM 2009–043 expired on September 30, 2010, the BLM continues to act in accordance with this policy since its expiration. The BLM has issued offers of ROW using the rate policy set by IM 2009–043 as recently as February of 2012.

generation. This criterion notwithstanding, all current solar applications for a right-of-way permit should be grandfathered and not subject to competitive leasing.

IX. BLM Should Use a Lease Rather Than a Right-of-Way to Authorize Utility-Scale Solar Energy Projects

BLM currently issues rights-of-way to authorize utility-scale solar energy facilities. At multiple points within the ANPR, BLM speaks in terms of *leasing* public lands for solar and wind energy development. If BLM intends to begin issuing leases for utility-scale solar energy projects, SEIA strongly supports this change.

Leases would provide solar energy facilities with greater land tenure than rights-of-ways. Typically, a right-of-way is a license to pass across the real property of another, while a lease operates to authorize possession of the real property of another. See Gamer, “A Dictionary of Modern Legal Usage,” 2d Edition (Oxford University Press, 1995). While rights-of-way may be suitable for transmission lines, pipelines and roads, they do not meet the needs of solar energy developers, which need to possess non-linear acreage on a long-term basis.

BLM has the authority to issue leases, rather than rights-of-way for solar energy facilities. Section 302(b) of FLPMA provides in part:

In managing the public lands, the Secretary shall, subject to this Act and other applicable law and under such terms and conditions as are consistent with such law, regulate, through easements, permits, leases, licenses, published rules, or other instruments as the Secretary deems appropriate, the use, occupancy, and development of the public lands . . .

43 U.S.C. 1732(b). This authority expressly allows BLM to issue leases.

BLM should clarify if its use of the word “leasing” indicates an intention to begin using leases rather than rights-of-way. If not, BLM should at least clarify its language and instead use the term “right-of-way.”

X. SEIA’s Specific Response to Questions Presented in the ANPR

In the ANPR BLM presents eight specific questions for which it seeks public comment. SEIA’s responses to these questions follow.

1. How should a competitive process be structured for leasing lands within designated solar or wind energy development leasing areas?

The use of competitive bidding within Solar Energy Zones (SEZs) is a flawed concept which will undermine the goal of zone-based development. BLM has developed SEZs in order to focus solar energy development on lands with fewer conflicts and will establish incentives for solar energy companies to site projects in these areas. For SEZs to be successful, BLM must populate them with viable projects. Competitive bidding will drive up the cost of developing projects within SEZs, increase the cost of solar power generated in SEZs, thereby making solar energy less viable in the marketplace and ultimately increase the risk of a project within an SEZ being successfully completed. Rather than promoting the most effective use of land within SEZs, competitive bidding would favor those entities capable of offering the highest up-front bid, regardless of the overall benefit they may offer in return for the use of the land.

An important incentive BLM has proposed for developing solar energy projects within SEZs is the financial incentive of phased rental payments. Under this proposed incentive, rental rates would be kept low until the project begins generating electricity. This incentive would reduce the up front costs of bringing a project on-line. Competitive leasing within SEZs would essentially undo any benefit from phased rentals by increasing upfront costs. Again, this lessens the viability of successful solar energy projects within SEZs.

2. Should a competitive leasing process be implemented for public lands outside of designated solar or wind energy development leasing areas? If so, how should such a competitive leasing process be structured?

No. Competitive leasing is even more inappropriate outside of SEZs. Developing a project outside of an SEZ would require an applicant to obtain a variance under the Modified Solar Energy Development Program Alternative in the supplement to the draft Solar PEIS. Obtaining a variance could put an applicant through a considerable amount of time, work and expense. An applicant who has successfully obtained a variance should not see that investment placed at risk of loss to a higher bidder.

3. What competitive bidding procedures should the BLM adopt?

If BLM chooses to develop a competitive leasing system for solar energy facilities, the bidding variable should be the price paid per acre of leased land. A bonus bid-

ding system is inappropriate as discussed in Sections II through VI above. Bidding on the price paid per acre resolves how an appropriate per acre price might otherwise be established, and would lock in a price for the duration of the lease or right-of-way. Establishing a fixed price for land over the length of the authorization is an important goal of the solar energy industry and mirrors the way contracts are structured for private land. SEIA still endorses the phasing of rental payments. Bidding using rentals as the variable could still be structured to allow for a lower initial rate and an increase once a project is generating electricity.

In addition, SEIA recommends that the following general principles be followed, if BLM chooses to implement competitive bidding:

- BLM should not implement competitive bidding by regulation until it has tested the process first. We recommend that if BLM chooses to adopt competitive bidding, it begin by conducting a pilot project through which BLM and the solar energy industry can judge the effectiveness of the system chosen. By conducting a pilot project, BLM will have the ability to modify the competitive bidding system based on its own analysis and feedback from the solar energy industry. Most importantly, BLM should allow itself the flexibility to continue its current solar permitting regime while it develops a competitive bidding policy. BLM has the authority to conduct such a pilot project under 43 C.F.R. 2804.23. If the pilot project is considered unsuccessful, BLM should preserve its ability to reject the use of competitive bidding and to rely on technical and financial criteria to decide among competing applications.
- To the extent that BLM implements a competitive bidding system or competitive bidding pilot project, neither should apply to existing solar applications. Rather, all pending solar applications should be grandfathered and processed under the current ROW application system.
- No royalty should be established or adopted, regardless of how competitive bidding is structured. Solar energy generation does not result in the depletion of the resource which is the economic rationale for imposing a royalty.
- Due diligence requirements should be established separately from the bidding process. However, only those who qualify as an acceptable bidder in accordance with BLM policies should be allowed to submit a bid. See Question 9 below for further details.
- BLM should not establish a value below which it will refuse a competitively offered lease price. If a minimum bid is considered necessary to reduce possible speculation, at most a minimum bid of \$1 per acre should be established.
- Any increase in the acreage necessary for a project that has already undergone competitive bidding should not involve competitive bidding for the additional land.
- No two-stage or multifactor bidding systems should be used for solar energy projects.

4. What is the appropriate term for a competitive solar energy ROW lease?

In response to a request for public comments on the supplement to the draft Solar PEIS, SEIA commented as follows:

BLM has determined, by policy (WO IB No. 2006-006), that the initial term of a ROW grant issued under the Federal Land Policy and Management Act of 1976 ("FLPMA") generally should not exceed 30 years. However, the 30 year cap is only a policy. The regulations require only that a ROW grant be limited to a "reasonable term" as established by BLM after considering "(i) The public purpose served; (ii) Cost and useful life of the facility; (iii) Time limitations imposed by licenses or permits required by other Federal agencies and state, tribal, or local governments; and (iv) The time necessary to accomplish the purpose of the grant", 43 C.F.R. § 2805.11(b)(1). BLM has stated in guidance documents that it will consider terms greater than 30 years based on the factors set forth in 43 C.F.R. § 2805.11(b)(1) and whether "the applicant/holder can demonstrate the 30 year term and provision for renewal is not sufficient." BLM Policy and Procedures for Issuance of "Long Term" Right-of-Way Grants and Easements Over Public Lands To Be Transferred Out of Federal Ownership 8 (June 2007).

The [Solar] PEIS alludes to plans to limit the term of a solar ROW grant to 30 years. (SDPEIS at p. 2-2.) BLM's advanced notice of proposed rule-making to establish a competitive bidding process and other policies confirm that BLM intends to establish such a rule. 76 Fed. Reg. 81,906 (Dec. 29, 2011). Although BLM is correct in observing, in support of the proposed

rule, that Power Purchase Agreements tend to be 25–30 years, this time-frame does not take into account the construction or the decommissioning period for a project. An additional buffer of five to seven years should be built into the ROW grant period to account for these activities.

SEIA resubmits these comments for this ANPR. Some developers have suggested lease terms as long as 50 years.

5. What is the appropriate term for a competitive wind energy ROW lease?

SEIA declines to comment on this.

6. Should nomination fees be established for the competitive process? If so, how should the fees be determined?

No. For reasons stated above, levying additional charges on solar energy companies is at cross purposes with Congressional policies intended to promote the deployment of more solar energy nationwide. Moreover, fees are typically paid for services provided to a particular beneficiary. It is unclear at present what services BLM would be providing for payment of nomination fees.

7. How should the bidding process for competitive solar and wind energy ROW leases be structured to ensure receipt of fair market value?

See our answer to Questions 1 and 3. In addition, BLM has been receiving fair market value for rights-of-way without competitive leasing for over 35 years.

8. Should a standard performance bond be required for competitive solar and wind energy ROW leases and how should the bond amount be determined?

SEIA submitted extensive comments on bonding in its May 2, 2011 comment letter on the draft Solar PEIS (see pp. 33–37). We reiterate our request that BLM address the concerns raised and implement the suggested changes contained therein.

9. What diligent development requirements should be included in competitive solar and wind energy ROW leases?

SEIA supports the diligent development requirements set forth in BLM's IM 2011–060.

XI. Conclusion

SEIA appreciates the opportunity to provide these comments on the ANPR and your consideration of them. We look forward to continuing to work with BLM to advance environmentally responsible solar energy development on public lands.

Sincerely,

Paul B. Smyth,
Perkins Coie LLP
700 Thirteenth Street, NW
Washington, DC

On behalf of the Solar Energy Industries Association

Dr. GOSAR. I thank you very much.
Mr. Wood.

STATEMENT OF CHRIS WOOD, PRESIDENT AND CEO, TROUT UNLIMITED

Mr. WOOD. Chairman Lamborn, Representative Gosar, and Ranking Member Holt, my name is Chris Wood, and I am the President and CEO of Trout Unlimited. Thank you for the opportunity to testify today in support of Representative Gosar's bill, H.R. 596, the Public Lands Renewable Energy Development Act.

Trout Unlimited supports responsible energy development on public lands, including the expansion of renewable energy, if it is done right. Fish and wildlife habitat and hunting and angling opportunity on public lands face many threats today. These include

traditional energy development, insect and disease outbreaks, intense and more frequent wildfire, invasive plants, private land development, and drought conditions in already over-subscribed basins. If we are going to add large-scale wind and solar development to this picture, it must be done in a thoughtful way.

This bill offers a way to offset the unavoidable impacts on fish and wildlife and water resources by creating a conservation fund derived from royalties and other revenues from public land, wind, and solar development. This conservation fund is essential to our ability to balance wind and solar energy development with the kind of unparalleled hunting and fishing opportunities that make our Western public lands a prime destination for sportsmen and women around the world.

The conservation fund would be used in regions where renewable energy development takes place, so that work can be done to improve our lands and waters. For example, invasive plant treatment could be done to enhance big game habitat on surrounding lands to improve the health of the herd. Projects to increase irrigation efficiency could be used to stretch the water supply and provide flows for fish, even as new water demands for energy development are met. And where an area previously used by hunters becomes a wind or solar project area, voluntary access easements could be used to gain better access to surrounding public lands.

If we have the resources to do these types of activities, we will be able to balance wind and solar development with fishing and hunting opportunities on a landscape scale. Conservation is the most forward-looking and optimistic idea that America ever gave the rest of the world.

Representative Gosar, your bipartisan bill embodies that spirit of optimism. It is a demonstration of what can happen when people of goodwill come together and apply common sense to common problems for the common good. It is so rare to see such a bipartisan bill with such strong support from 14 members of this subcommittee as cosponsors. This is good public policy, and with it we can develop energy resources, bolster local economies, diversify county revenue streams, and make the fishing and hunting in those areas better than we found it.

Again, I want to thank you for the opportunity to testify today. We appreciate your leadership on this issue, Representative Gosar. And thank you to the Chairman and Ranking Member for holding this hearing, and to the 14 members of the subcommittee who have signed on as cosponsors.

[The prepared statement of Mr. Wood follows:]

PREPARED STATEMENT OF CHRIS WOOD, PRESIDENT AND CEO, TROUT UNLIMITED ON
H.R. 596

Chairman Lamborn, Ranking Member Holt, and members of the subcommittee, thank you for the opportunity to testify in support of Rep. Gosar's bill, H.R. 596, the Public Lands Renewable Energy Development Act. My name is Chris Wood. I am the President and CEO for Trout Unlimited. My testimony will share with you the perspective of the hunting and angling community on public land wind and solar development, and how H.R. 596 can help set us on a path to responsible energy development that takes care of the interests of hunters and anglers, and the fish and wildlife habitat we depend on.

Wind and solar energy projects are a relatively new, but growing presence on western public lands. Since the beginning of 2009, 29 solar projects totaling more

than 8,000 megawatts, and 11 wind projects totaling more than 4,000 megawatts, have been approved on public lands in the United States.

TU supports responsible energy development on public lands. We take pride in our efforts to work with traditional energy developers and Federal land managers to ensure that development is balanced with fishing and hunting opportunities.

It is important to understand the context for energy development on public lands. Numerous stressors on the western landscape affect fish and wildlife habitat and hunting and angling opportunity. These include: traditional energy development, insect and disease outbreaks, intense and more frequent wildfire, invasive plants, private land development, and drought conditions in already over-subscribed basins. If we're going to add large-scale wind and solar development to this picture it must be done in a thoughtful way.

Processes such as the Solar Programmatic EIS, which identified zones suitable for development, are helping to guide sound siting decisions that avoid and minimize impacts to fish and wildlife habitat. Even with the best siting decisions, however, large-scale wind and solar projects will take up big chunks of land for long periods of time, and some impacts will be unavoidable. The Public Lands Renewable Energy Development Act provides an answer to this challenge.

The bill offers a way to offset unavoidable impacts on fish, wildlife, and water resources by creating a conservation fund derived from royalties and other revenues from public land wind and solar energy development. This conservation fund is essential to our ability to balance wind and solar energy development with the kind of unparalleled hunting and fishing opportunities that make our western public lands a prime destination for sportsmen and women from around the country.

The conservation fund would be used in regions where renewable energy development takes place so that work can be done to improve our lands and waters. For example, invasive plant treatment could be done to enhance big game habitat on surrounding lands to improve the health of the herd. Projects to increase irrigation efficiency could be used to stretch the water supply and provide flows for fish, even as new water demands for energy development are met. Where an area previously used by hunters becomes a wind or solar project, voluntary access easements could be used to gain better access to surrounding public lands. If we have the resources to do these types of activities we'll be able to balance wind and solar development with fishing and hunting opportunities on a landscape scale.

Finding a balance between wind and solar development and the conservation of fish and wildlife on public lands will be essential to the future of renewable energy on public lands. Wind and solar offer the prospect of much-needed jobs and increased energy security for our Nation. We need for these benefits to coexist with the outstanding cultural and economic benefits of hunting and fishing. A survey by the Fish & Wildlife Service found that 91.1 million U.S. residents fished, hunted, or wildlife watched in 2011, and they spent \$145 billion on their activities. This is a large, and growing, contributor to our economy: 11 percent more people fished in 2011 than in 2006, and 9 percent more people hunted. We need high quality, accessible habitat to sustain this economic activity. The conservation fund created by the Public Lands Renewable Energy Development Act would support the work needed to maintain our public land natural resource values.

The sportsmen's community is one that is naturally inclined to work collaboratively to solve problems. Trout Unlimited's 155,000 members annually dedicate more than 600,000 volunteer hours to conservation. Hunters and anglers are strong conservationists, and our members take great pride and joy in planting trees along streams, removing invasive plants, or working with agencies to reconnect streams. The Public Lands Renewable Energy Development Act, by providing the resources needed to do habitat improvement work in the field, will help position the sportsmen's community as partners as wind and solar projects are built on public lands.

I'm an angler, as are almost all Trout Unlimited members. Conservation is the most affirmative, hopeful, and optimistic idea that America ever gave the rest of the world. And fishing is inherently an act of optimism. Each time you cast a fly, it is with the hope that you're about to hook a fish—even if your last 100 casts have come up empty. That spirit of optimism permeates Trout Unlimited's work. In Rep. Thompson's district we clean up abandoned mines and get fish back into streams where they had been wiped out for decades. In Montana we work with ranchers to conserve water and restore trout to streams that had previously run dry. In Wyoming we partner with landowners to improve old water diversion structures and enable fish to reach upstream habitat. These projects start with the idea that we can make things better than they are today, and they succeed through hard work and cooperation.

Rep. Gosar's bill embodies this spirit of optimism. It is a demonstration of how people of goodwill can come together to apply common sense to common problems

for the common good. With it we can develop energy resources, bolster local economies, diversify county revenue streams, and make the fishing and hunting better than we found it. That is why it has attracted the support of 59 cosponsors in the House—including half of the members of this subcommittee—from both sides of the aisle and every point on the political spectrum. I am proud to testify alongside partners from state and county government, and the environmental community, who have come together in support of this legislation.

Again I thank you for the opportunity to testify today. We appreciate the leadership of Representative Gosar on this issue. Thank you to the Chairman and Ranking Member for holding this hearing, and thank you to the 14 members of the subcommittee who have signed on as cosponsors. We look forward to working with all of you to advance the Public Lands Renewable Energy Development Act.

QUESTION SUBMITTED FOR THE RECORD TO CHRIS WOOD

Question. Do you see a distinction between project-specific mitigation and the conservation fund in H.R. 596?

Answer. Thank you for your question. Yes, I do see a distinction between project-specific mitigation and the conservation fund in H.R. 596.

Hunters and anglers need abundant populations of fish and game and access to public lands in order to sustain our sporting heritage. The habitat needed to support abundant fish and wildlife is facing a wide range of threats. Many parts of the West are experiencing prolonged drought and more frequent and intense fires. Impacts from past activities continue to plague our lands and waters. For example, old, abandoned mines pollute 40 percent of western headwater streams. Invasive species, new development, and other impacts put further stress on fish and wildlife.

Together these impacts are taking a toll on fishing and hunting. Many native trout populations are now found in just a small fraction of their native ranges. A 30 percent population decline in the Sublette mule deer herd unit in the Pinedale Anticline gas field occurred between 2001 and 2012. According to the Wyoming Game and Fish Department, the statewide mule deer harvest in 2011 was the lowest in a decade. Permits for hunting licenses have had to be decreased to accommodate such losses. In south-central Wyoming, a decrease in the population of the Bitter Creek pronghorn herd unit has resulted in the Wyoming Game and Fish Department issuing just over 200 licenses in 2011, down from a high in the 1990s of more than 3,700 licenses.

We need to do more than manage the decline of fish and wildlife. Fortunately, we have the ability to recover fish and wildlife populations. We have seen trout return to streams where abandoned mines were restored. We have reopened spawning habitat for native trout that had been blocked for decades. In some cases fish have returned to recovered habitat within days of completing a project.

Restoring fish and wildlife habitat takes funding and a lot of hard work. Trout Unlimited members annually dedicate nearly 700,000 hours of volunteer time for trout and salmon conservation. We are doing all we can with existing resources, but it is not enough. Restoring abandoned mines alone would cost upwards of \$72 billion. We have to reconsider how we tackle these challenges and come up with new solutions.

The conservation fund in H.R. 596 is one part of the solution. It will enable us to do the necessary work to actually improve fishing and hunting even as we develop new sources of energy. In regions where wind and solar development takes place, the fund will allow us to conserve and restore habitat, secure access, and make sure that we sustain and improve hunting and fishing opportunities.

Dr. GOSAR. Thank you, Mr. Wood, and thanks for giving me a smile yesterday, talking about fly-fishing.

Mr. Fitzer.

STATEMENT OF ERIC FITZER, SENIOR ENERGY PROGRAMS MANAGER, ARIZONA GOVERNOR'S OFFICE OF ENERGY POLICY

Mr. FITZER. Mr. Gosar, members of the subcommittee, my name is Eric Fitzer. I am the Senior Energy Programs Manager with the Arizona Governor's Office of Energy Policy. I am pleased to have

this opportunity to provide testimony with respect to the Public Lands Renewable Energy Development Act of 2013, H.R. 596. I understand that the Western Governor's Association has submitted comments in support of H.R. 596. I echo many of their statements.

Solar generation in Arizona grew exponentially from 2010 to 2013. In 2011, there were almost 84,000 megawatt hours of solar energy generated in Arizona. In 2012, the state installed more utility-scale solar than any other state in the United States, which, in 2013, resulted in enough solar energy to power 145,500 homes.

Governor Brewer has committed to make Arizona the solar capital of the world. This commitment is reiterated as the number-one goal in Arizona's master energy plan established by executive order in 2014, entitled, "Empower Arizona." This goal is to increase solar energy development through best practices, and leading by example.

For some background, Arizona's surface area is approximately 72 million square acres of land, about 113,000 square miles, and is the sixth largest in the United States. Major land owners in the state are the Federal Government, with 42 percent, tribes at 28 percent, private lands at 17 percent, state trust land at 13 percent. For Arizona to become the solar capital of the world, Arizona will look to development of public lands in order to achieve this goal.

For some further background, I was the Planning and Economic Development Director with the Town of Gila Bend, which is located about 72 miles southwest of the Phoenix Metropolitan Area. And this really created the Solar Field Overlay Zone in which to fast-track utility-scale solar development. This overlay zone program resulted in permitting over 200 megawatts of utility-scale projects and millions of dollars in economic development in that community.

As just one example, this program allowed development to go from first submittal to the jurisdiction, which was me, to actual permitting and development within 6 weeks, which was unheard of at the time. This program was looked at by other communities in Arizona and replicated, albeit not to the 6-week time frame, but to overall speed up development of renewable, more specifically, solar energy in Arizona.

In conversations with the development community about this process, what was stated on multiple occasions was that, although the time frames were significant, for these projects to develop, the greatest benefit of this program was risk reduction. The development community knew, when they submitted plans, they would get approvals, and such approvals would come in at a time frame that was pre-determined by the developer and a permitting authority.

What H.R. 596 does is modernize wind and solar development on public lands. The current permitting process utilized is the right-of-way and special use permitting for solar and wind. This bill would establish a specific leasing mechanism, thereby improving the permitting process and beginning to reduce the risk for development on public lands.

Another aspect of this bill is that it provides a mechanism for the state and counties to share in the royalties obtained from renewable energy projects located on public lands. This bill provides incentive for the State of Arizona and counties within Arizona to promote development on untaxable public lands, which would cover

state and local governments' cost to deliver critical governmental services, and make needed capital improvements to accommodate the development of public lands.

Through my career of working in municipalities in Arizona and now the State of Arizona, the Public Lands Renewable Energy Development Act could be extremely beneficial for Arizona, and is where the majority of the funds generated by renewable energy leases in Arizona should be targeted.

In the past, Congress recognized increased burdens on development of public lands. The Energy Policy Act of 2005 created a program for the sharing of revenues gained from geothermal energy production on Federal lands. H.R. 596 would likewise facilitate the sharing of revenues generated by solar and wind leases.

The Governor's Office of Energy Policy supports the continued and accelerated development of renewable energy projects in Arizona. Arizona has a track record of accelerated deployment of solar energy projects, and we would welcome the opportunity to be the preferred location of the pilot leasing program for solar development through the competitive auction process.

Arizona, the soon-to-be solar capital of the world, looks forward to helping meet the current and future energy needs of the United States, while ensuring protection of our precious natural resources. Enactment of H.R. 596 will help Arizona achieve these goals.

Thank you for the opportunity to submit testimony on an issue of great importance to the State of Arizona.

[The prepared statement of Mr. Fitzer follows:]

PREPARED STATEMENT OF ERIC FITZER, SENIOR ENERGY PROGRAMS MANAGER,
ARIZONA GOVERNOR'S OFFICE OF ENERGY POLICY ON H.R. 596

Mr. Chairman and members of the subcommittee, my name is Eric Fitzer and I am the Senior Energy Programs Manager at the Arizona Governor's Office of Energy Policy. I am pleased to have this opportunity to provide testimony with respect to the Public Lands Renewable Energy Development Act of 2013 (H.R. 596). I understand that the Western Governors' Association has submitted comments in support of H.R. 596; I echo many of their statements.

Solar generation in Arizona grew exponentially from 2010 to 2013. In 2011, there were almost 84,000 MWh of solar energy generated in Arizona. In 2012, the state installed more Utility-scale solar than any other state which in 2013 resulted in enough solar energy to power 145,500 homes.

Governor Brewer has committed to make Arizona the "Solar Capitol of the World" this commitment is reiterated as the number one goal in Arizona's Master Energy Plan, established by executive order in 2014, entitled *emPOWER Arizona*. This goal is to *Increase Solar Energy Development through Best Practices and Leading by Example*.

For some background; Arizona's surface area is approximately 72.9 million acres of land (113,417 square miles) and is the sixth largest in the United States. Major landowners in the state are: the Federal Government with 42 percent; Tribes 28 percent; Private lands 17 percent; State Trust Lands 13 percent. For Arizona to become the "Solar Capitol of the World" Arizona will look to development of public lands in order to achieve this goal.

For some further background, I was the Planning and Economic Development Director with the Town of Gila Bend. In this role I created the Solar Field Overlay Zone in which to fast track Utility-scale solar developments. This overlay zone program resulted in permitting over 200 MWs of Utility-scale solar projects and millions of dollars in economic development in the Gila Bend area. As just one example this program allowed a development to go from the first submittal to the jurisdiction, to permitting and actual development within 6 weeks; which was unheard of at the time.

This program was looked at by other communities in Arizona and replicated, all be it not to the 6-week time frame, but to overall speed up the development of renewable, more specifically solar, energy in Arizona. In conversations with the devel-

opment community about this process, what was stated on multiple occasions was that, although the time frames were significant for these projects to develop, the greatest benefit of this program was risk reduction. The development community knew when they submitted plans they would get approvals and such approvals would come in a time frame that was predetermined by the developer and the permitting authority. What H.R. 596 does is modernize wind and solar development on public lands. The current permitting process utilized is through Right-Of-Way (ROW) and Special-Use permitting for solar and wind. This bill would establish a specific leasing mechanism thereby improving the permitting process and beginning to reduce the risk to development on public lands.

Another aspect of this bill is that it provides a mechanism for the state and counties to share in the royalties obtained from renewable energy projects located on public lands. This bill provides incentives for the State of Arizona and counties within Arizona to promote development on untaxable public lands which would cover state and local government costs to deliver critical governmental services and make needed capital improvements to accommodate development of public lands.

Through my career of working in municipalities in Arizona and now the State of Arizona, the Public Lands Renewable Energy Development Act could be extremely beneficial for Arizona and is where the majority of the funds generated by renewable energy leases, in Arizona, should be targeted. In the past Congress recognized increased burdens on the development of public lands. The Energy Policy Act of 2005 created a program for the sharing of revenues gained from geothermal energy production on Federal lands. H.R. 596 would likewise facilitate the sharing of revenues generated by solar and wind leases.

The Governor's Office of Energy Policy supports the continued and accelerated deployment of renewable energy projects in Arizona. Arizona has a track record of accelerated deployment of solar energy projects and would welcome the opportunity to be the preferred location of the pilot leasing program for solar development through the competitive auction process. Arizona, the soon to be Solar Capitol of the World looks forward to helping meet the current and future energy needs of the United States while ensuring protection of our precious natural resources. Enactment of H.R. 596 will help Arizona achieve these goals. Thank you for the opportunity to submit testimony on an issue of great importance to the State of Arizona.

QUESTIONS SUBMITTED FOR THE RECORD BY CONGRESSMAN HOLT TO ERIC FITZER

Question. How does the State of Arizona go about siting solar farms on state lands? Is it through a lease? And if so, what is the term of the lease and what is the royalty rate?

Answer. I shall respond to the first part by itself and the second and third as one question. My responses are as follows:

How does the State of Arizona go about siting solar farms on state lands?

The State of Arizona does not necessarily "site" solar farms on State Lands. The Arizona State Land Department (ASLD) also known as "The Trust" constitutes approximately 13 percent of land ownership in Arizona. The Trust lands are not public lands, but are instead the subject of a public Trust created to support the education of Arizona's children. The Trust accomplishes this mission in a number of ways, including, through its sale and lease of Trust lands for grazing, agriculture, municipal, school site, residential, commercial and open space purposes. The "Trust law" requires Trust lands be sold or leased for their highest and best appraised use to the highest bidder at public auction. In Arizona any sale of Trust land, or long-term lease, more than 10 years in duration, must be appraised and then be publicly auctioned to the highest bidder; then must be approved by the Board of Appeals which is made up of five members appointed by the Governor. Dependent on the location of the land and the proposed use, additional costs may be incurred, and are the responsibility of the applicant. These may include, but are not limited to an ALTA Land Survey, Archaeological Survey, Geotechnical Report, Infrastructure Analysis, Phase I Environmental Assessment Report and Appraisal Report.

During the years of 2011 and 2012 the ASLD and the Governor's Office of Energy Policy (GOEP) embarked on the Arizona Renewable Energy Mapping Project which culminated in the Geographic Information Systems (GIS) Solar Energy Map Viewer. The project was a partnership between the two agencies to identify Trust Land parcels which were suitable for renewable energy development, including solar. That being said, parcels identified as suitable are not a prerequisite of siting renewable energy on Trust lands, but was generated in order to guide the renewable energy

development community in identifying potential lands for renewable energy development.

Is it through a lease?

And if so, what is the term of the lease and what is the royalty rate?

The ASLD approval of solar sited on Trust lands is through the *Solar Long Term Lease*. The *Solar Long Term Lease* is through the ASLD Commercial Leasing mechanism. As stated in the previous section, if the lease duration is longer than 10 years the lease must be obtained through a public auction by the highest bidder. The Solar Lease was developed in 2012 due to the amount of interest in leasing Trust parcels by the solar energy industry. The lease carries a 30-year initial term with four potential 10-year extensions. The initial term may be terminated sooner subject to provisions of the lease.

The *royalty rate* is accomplished through *Annual Rent* which is made up of *Base Rent* and *Additional Rent*. Descriptions of these two rents are below:

BASE RENT

The Base Rent is a percentage of appraised value commensurate with the Bureau of Land Management (BLM) schedule at the time of appraisal; in any event the ASLD determined appraised land value is controlling in years 1 through 5. In years 6 through 30 each 5 lease years, commencing with year 6, shall be deemed an "Adjustment Period". The Base Rent for the Adjustment Period shall be increased by an amount equal to 5 percent over the Base Rent for the last lease year of the then expiring Adjustment Period. In no event shall the Base Rent for any Adjustment Period be less than the Base Rent in effect for the last lease year prior to the then applicable Adjustment Period.

ADDITIONAL RENT

In addition to Base Rent the Lessee shall pay a Megawatt Capacity Fee. The Megawatt Capacity Fee is broken up into the following: Photovoltaic at \$5,256 annually for each Megawatt of Nameplate Capacity; the Concentrated Photovoltaic and Concentrated Solar Power without storage at \$6,570 annually for each Megawatt of Nameplate Capacity; and the Concentrated Solar Power with storage capacity of 3 hours or more at \$7,884 annually for each Megawatt of Nameplate Capacity. Additionally the Additional Rent is phased-in over a 5-year period beginning after the commencement of operations at the facility and increasing 20 percent each year during the phase-in period.

I am hopeful that I have been able to answer the questions posed.

Dr. GOSAR. Thank you, Mr. Fitzer.
Mr. Huntley.

STATEMENT OF CHASE HUNTLEY, SENIOR DIRECTOR, GOVERNMENT RELATIONS FOR ENERGY, THE WILDERNESS SOCIETY

Mr. HUNTLEY. Thank you, Mr. Gosar, members of the subcommittee. Thanks for the opportunity to testify today on development of renewable energy resources on Federal lands. My name is Chase Huntley, and I am Senior Director of Government Relations for Energy at The Wilderness Society.

We strongly support efforts to tap into the rich, renewable resources found on our public lands. This includes working to ensure that the development of needed new energy resources is done in a way that protects and contributes to the health of our lands, recreational opportunities, and local communities. We agree with the subcommittee's goal of promoting development of renewable energy on public lands, and have pressed hard for a common-sense philosophy that works at a landscape scale to site renewable energy in the right places, with smart up-front planning and stakeholder input from the beginning.

As you know, the West is home to more than just energy. It boasts some of the world's most impressive parks, hunting and fishing spots, and other recreation opportunities. Not surprisingly, tourism is a major economic driver, as we know well. The Western Governor's Association estimates that outdoor recreation is responsible for \$256 billion in annual spending, directly supporting 2.3 million jobs, and contributing \$31 billion in tax revenue. That is why 95 percent of Westerners of all types have visited public lands in the last year, and we believe we don't have to give up this important and growing economic sector to develop renewable energy. In fact, smart policies can actually help it grow.

For too long, energy development has been characterized by conflict and controversy on our public lands, attributed in most cases to poor siting decisions that were not revealed until late in the permitting process. By replacing the scattershot approach to permitting with up-front decisions on where development is most compatible, and making a real commitment to reinvest in the health of our local communities and the landscape, we can tap the renewable energy we need without sacrificing our world-class recreational opportunities and the economy it supports.

The legislation under consideration today is aimed at improving permitting outcomes. In our view, H.R. 1363 falls short of that goal, because the bill eliminates important safeguards for public health and safety. The bill appears to attempt to establish a categorical exclusion, but as drafted, in our view, would eliminate the Agency's authority to undertake environmental review.

We question whether this effort is even necessary, given that many geothermal testing applications are processed swiftly, using an environmental assessment. Nevertheless, when an agency determines the proposal is likely to result in significant impacts, current law requires further analysis and stakeholder consultation, and documentation and an impact statement. This bill eliminates the Agency's ability to undertake this outreach and analysis precisely when it is most needed.

We support H.R. 596, because it offers a balanced approach to promoting wind and solar, while enhancing the health of our public lands, counties, and recreational opportunities. Most importantly, it does so by building new partners for renewable energy, by linking community and conservation goals to project deployment.

Under the bill, Federal land managers would consider how best to develop these resources to the benefit of taxpayers, the industry, and other land users. For example, the bill proposes to move to a modern lease-based system, rather than the right-of-way system currently in place, consistent with the findings of congressional auditors.

The bill would establish a mechanism to reinvest in communities, states, and counties most impacted by wind, solar, and geothermal projects, as well. The bill creates a system that returns a portion of rents and royalties from permitting to improving the very permitting processes that can make it both more efficient to review and process applications in a manner that is similar to the permit process improvement fund already in place for oil and gas development.

But for us, most significantly, the bill makes a commitment to enhance natural resource conservation and stewardship as a part of renewable energy development and production. The bill establishes the Fish and Wildlife Conservation Fund that would help support expanding recreational access and conservation and restoration work.

For example, the bill could help restore watersheds and repair trail networks on our public land to enhance outdoor recreation. Just like our roads and bridges, our natural infrastructure is deteriorating. In the face of shrinking Federal resources, the Conservation Fund proposed in the bill can reinvest in the health and integrity of our public lands to help meet the new challenges facing Federal and state land managers.

We will continue to work diligently with the industry, administration, and Congress to find solutions that work as well for wind, solar, and geothermal as they do for wildlife and wild lands. We look forward to seeing the subcommittee and the committee advance H.R. 596, and hope to have an opportunity to strengthen and pass it.

Thanks, and I look forward to answering any questions.

[The prepared statement of Mr. Huntley follows:]

PREPARED STATEMENT OF CHASE M. HUNTLEY, SENIOR DIRECTOR OF GOVERNMENT RELATIONS FOR ENERGY, THE WILDERNESS SOCIETY ON H.R. 596 AND H.R. 1363

Mr. Chairman, Ranking Member Holt, and members of the subcommittee: thank you for the opportunity to provide testimony regarding development of renewable energy resources on Federal lands. My testimony draws on the collective experience of The Wilderness Society's staff across the country.

The Wilderness Society works on behalf of its 500,000 members and supporters to protect wilderness and inspire Americans to care for our wild places. This includes working to ensure that the development of needed new energy resources is done in a way that protects the ecological integrity of the land.

We are strong supporters of efforts to tap the rich renewable resources found on our public lands and forests. Renewable energy projects like wind, solar and geothermal have environmental impacts, although much lower than fossil energy projects when accounting for both the physical and atmospheric footprint. As with any form of development, not all places are appropriate for renewable energy. Some places are simply too wild or too sensitive to develop. And where development occurs, it must take place in a responsible manner to ensure the health and safety of local community and other land users.

You invited me to speak on two of the three bills being considered today.¹ We support H.R. 596, the Public Lands Renewable Energy Development Act, because it provides the Interior Department with direction and additional authority needed to develop renewable energy efficiently and effectively, while avoiding or minimizing ecological impacts. We oppose H.R. 1363, the Exploring for Geothermal Energy on Federal Lands Act, because the bill eliminates important safeguards in the case of proposed projects likely to cause significant environmental harm.

STATUS OF PERMITTING RENEWABLE ENERGY ON PUBLIC LANDS

Federal land management agencies have come a long way in a short while to advance renewable energy development. Congress has never spoken directly to how wind and solar should be managed on public lands, and only in recent years has there been an organized effort to leverage the renewable power potential of public lands.

Following direction contained in Secretarial Order 3285, the Bureau of Land Management (BLM) has since taken significant steps to creating a sensible renewable energy program. For example, the BLM finalized its western solar plan in

¹ Although not the subject of this testimony, note that we also support the intent of the third bill that is the subject of this hearing—H.R. 2004, the Geothermal Production Expansion Act—because it would reduce predatory leasing by speculators seeking to block otherwise development on land found to be otherwise acceptable.

November 2012 that identified low-conflict areas in six southwestern states ideal for solar energy production. The plan seeks to incentivize development in these solar energy zones with more efficient and standardized permitting. The program is still in the implementation phase, but recently saw the first successful competitive auction for parcels of the Dry Lake solar energy zone in Nevada. The BLM has also made substantial progress in working through a large queue of backlogged applications for wind, solar, geothermal and transmission. Fifty-two renewable energy projects have been approved by BLM since the beginning of 2009, totaling 13,957 megawatts of new power. These projects are creating jobs, driving innovation, and will help supply Western markets with clean, renewable power for decades to come. Our public lands have played a major role in achieving near-term Federal and state renewable energy generation goals, but only because of focused effort to correct decades of inattention and inactivity toward developing renewable energy as a major component of the Nation's energy mix.

Further innovations are underway. The Office of Management and Budget recently released its final implementation plan for Executive Order 13604, aimed at improving the timeliness and quality of decisions on infrastructure projects. This effort has real potential to rationalize permitting decisions by eliminating redundancy, improving front-end coordination and recognizing the need to improve environmental outcomes through advanced siting and mitigation practices. The BLM is in the early stages of a rulemaking on wind and solar leasing. And the Department of the Interior's Secretarial Order 3330 and supporting strategy for landscape-scale efforts to mitigate the impacts of development, including energy projects, holds great promise to lessen the footprint of development by selecting smart sites and focusing mitigation actions in areas likely to yield the greatest ecological return. However, additional improvements are needed to fully realize the potential for renewable energy on public lands.

PUBLIC LANDS RENEWABLE ENERGY DEVELOPMENT ACT

The Public Lands Renewable Energy Development Act presents a conservative, balanced approach to ensuring renewable energy resources are developed in a manner that safeguards and enhances the health of our public lands, counties and recreational opportunities. The bill provides land managers with additional direction and authorities to aid in developing clean energy projects on public lands.

Under the bill, Federal land managers would consider how best to develop these resources to the benefit of taxpayers, project proponents and other land users. In particular, the bill proposes a move to a lease-based system, rather than rights-of-way currently in use. Such a system has been advocated by industry watchers,² the solar industry,³ and public land law scholars⁴ as providing greater certainty for all parties. And the bill considers whether alternative fee structures, such as a royalty, would be more appropriate for these industries in lieu of the current rental system, which has been criticized by the industry and other stakeholders. The bill has the potential to modernize wind and solar development on public lands. It can help put renewable energy on a level playing field with energy sources that have been developed on public lands for over a century, which have thrived on public lands in part due to the stable leasing system in place.

Importantly, the bill would establish a mechanism to reinvest in the counties, states and communities most impacted by projects. It reauthorizes the current system of payments for geothermal energy development, and creates a similar system for counties and states from the rents or royalties collected from wind and solar development. These funds are needed to address the concerns that infrastructure, public services and quality of life are stressed by the intense activities that come with utility-scale renewable energy development, even as they receive long-term economic benefit.

The bill also creates a system that returns a portion of rents and royalties from wind and solar to improving permitting that can help make it more efficient to

²E.g., see Scott Bank, "Practical Advice: Wind and Solar Projects on BLM (Bureau of Land Management) Lands," *Project Finance Newsletter*, Chadbourne & Parke LLP, November 2011. Accessed July 26, 2014, at http://www.chadbourne.com/practicaladvice_bureau_of_land_management_nov11_projectfinance/.

³Solar Energy Industries Association, "Comments to BLM on Proposed Rulemaking Regarding Competitive Process for Leasing Public Lands for Solar and Wind Development," February 2012. Accessed July 26, 2014, at <http://www.seia.org/research-resources/comments-blm-proposed-rulemaking-regarding-competitive-process-leasing-public>.

⁴Pamela Baldwin, "Fair Market Value for Wind and Solar Development on Public Land," November 2010. Accessed July 26, 2014, at <http://wilderness.org/sites/default/files/Fair-Market-Value-Whitepaper.pdf>.

review and process applications. These funds would support the data collection, monitoring and planning activities essential to smart permitting decisions, and would be available for transfer to cooperating agencies as well. This provision is similar to the Permit Process Improvement Fund already available for oil and gas development.

Most significantly, the bill makes a commitment to enhance natural resource conservation and stewardship as a part of renewable energy development and production. The bill establishes a fish and wildlife conservation fund that would support expanding recreational access, conservation and restoration work and other important stewardship activities. In the face of shrinking Federal resources, these funds are essential to keep pace with the new challenges facing Federal and state land managers. These conservation investments would not supplant or compete with traditional mitigation, but would instead create the opportunity to improve our lands and waters as we develop energy resources. Putting revenue already collected from renewable energy to work for conservation will link conservationists, sportsmen, recreationists and the renewable energy industry together.

EXPLORING FOR GEOTHERMAL ENERGY ON FEDERAL LANDS ACT

The Exploring for Geothermal Energy on Federal Lands Act is of concern to us because it would eliminate opportunities for public input and environmental analysis afforded by National Environmental Policy Act (NEPA) precisely when it is needed the most. Many, but not all, geothermal exploration applications are currently processed using environmental assessments, meaning the agency has determined the development proposal is unlikely to cause significant environmental impacts through NEPA review. However, when an assessment reveals significant project impacts, NEPA requires agencies to conduct further analysis and stakeholder consultation so projects are developed responsibly and safely. The bill would eliminate the agency's authority to conduct further analysis of public health, safety and environmental impacts for those projects it finds are likely to cause significant environmental impact. In so doing, the bill eliminates the opportunity for local communities, adjacent landowners, state governments, tribes and other land users to participate in a decision of whether and how best to permit the proposed activity. For this reason we believe the bill is likely to create significant risk, conflict, and delay for these proposed facilities, and even more likely to do so if such a facility ever attempts to attain a permit for a commercial production facility.

DEVELOPING SMART FROM THE START

We believe that the best way to rapidly deploy renewable energy projects is to end the scattershot approach to permitting that so often characterizes energy development on public lands. Thoughtful planning can move from project-by-project permitting toward clear policies that guide companies to suitable places, with early public engagement and consistent environmental review. To us, this kind of "smart from the start" approach includes several key elements:

- Landscape-level efforts to guide projects to areas that have high clean energy potential, access to existing or planned transmission, and minimal conflicts with wild lands and other important resources and uses;
- Early and ongoing input and coordination with interested stakeholders;
- Policies that fully and fairly value public lands, incentivize efficient generation and land use practices, and reinvest significant portions of revenue stream in conservation activities; and
- Effective mitigation measures to address unavoidable impacts with consistent monitoring and to improve operations and future permitting.

A smart from the start approach, if properly implemented, will provide added certainty for project developers, investors, conservationists, and other stakeholders by avoiding conflicts that result in costly delays. Key aspects of this concept are already being demonstrated for solar energy development on public lands. The recent Dry Lake Solar auction validates that well-selected development zones close to transmission and markets, and free from major natural resource and other conflicts, do exist and will attract significant development interest. Moreover, this experience underscores that existing administrative authority is capable of dramatically improving permitting conditions.

Putting in place policies designed to avoid known conflicts as early as possible is just common sense—but it is a new way to do business for Federal agencies. Congressional involvement to promote renewable energy development on public lands would be best directed toward supporting these efforts.

CONCLUSION

The Wilderness Society appreciates the aims of the subcommittee to improve development of these important clean energy resources on public lands and forests. We share the goal of ensuring faster, cheaper, and better outcomes for those interested in developing the rich renewable energy resources found on these lands—of developing renewable energy smart from the start. Because of its commitment to making wildlife and wildland conservation a part of energy development on public lands, we urge the subcommittee to advance H.R. 596.

Thank you for the opportunity to provide our views.

QUESTION SUBMITTED FOR THE RECORD TO CHASE HUNTLEY

Question. Thank you for the opportunity to testify on July 29, and for your additional question for the record regarding the difference between project-specific mitigation and the conservation fund established in H.R. 596.

Answer. We see the conservation fund established in this legislation as separate and distinct from any mitigation requirements for renewable energy projects, and something that will build and strengthen connections between wind and solar development and hunting, angling, and other recreation and conservation stakeholder groups by enhancing and restoring lands in public ownership.

Mitigation involves actions to avoid, reduce and offset impacts to public land from energy development. This includes landscape scale planning to guide projects to low-conflict, high energy areas, best practices in construction and operations to minimize impacts onsite, and compensatory or other actions when impacts cannot be avoided to offset damage to the important resources and values that public lands provide away from the project site. For recent projects, this has heavily emphasized impacts to threatened and endangered species included installing fencing to exclude Desert Tortoise, acquiring and protecting habitat, restricting disturbance activities during breeding season for sensitive species, and using sensitive plants as onsite revegetation materials.

The conservation fund in H.R. 596 derives from a portion of the rents and royalties that renewable energy companies already pay to produce energy on our public lands. These funds would be used in the region where wind and solar projects are built to improve fish and wildlife habitat and enhance the condition of our public lands for outdoor recreation like hunting, fishing, biking and hiking. This could include repairing or building trails, improving signage, restoring watersheds and addressing invasive species.

We believe it is important that Western communities and the American people benefit from more than just a 'no net loss' policy when it comes to energy development. Enhancing mitigation, with a focus on avoiding and offsetting impacts, is an essential component of a balanced approach to energy development. But additional investments are also sorely needed beyond project mitigation that enhance the health, resilience and recreational experience on public lands that provide so much economic, cultural, and environmental value to surrounding areas. In an age where Federal budgets for conservation are shrinking while visitation and associated management needs are growing, the conservation fund established in H.R. 596 provides much needed resources to restoring and improving public lands for the American people. Conservation programs make up just 1 percent of the Federal budget, but have seen cuts commensurate with programs that make up a much larger slice of the Federal Government. This is simply inadequate support given that these lands anchor the \$646 billion spent annually on outdoor recreation results in \$1.6 trillion in total economic activity, while supporting 12 million domestic jobs. Investing in conservation provides immense economic benefits to local communities and businesses.

This conservation fund ensures that sportsmen, outdoor recreationists, surrounding communities, wildlife and wildlands enjoy a return from clean energy development, which will build support for additional needed projects.

Dr. GOSAR. Thank you, Mr. Huntley.
Mr. Nedd.

**STATEMENT OF MICHAEL NEDD, ASSISTANT DIRECTOR,
ENERGY, MINERALS AND REALTY MANAGEMENT, BUREAU
OF LAND MANAGEMENT, U.S. DEPARTMENT OF THE
INTERIOR**

Mr. NEDD. Mr. Chairman and members of the subcommittee, thank you for the opportunity to present the views of the Department of the Interior on three bills concerning the Bureau of Land Management and development of renewable energy resources on public land. I will briefly summarize my written statements, and ask that they be submitted for the record in their entirety.

The Department and the BLM are committed to responsibly mobilizing the tremendous renewable energy resources available on public lands, and share the committee's interest in streamlining the development of those resources consistent with environmental protection and public involvement in agency decisionmaking. Since achieving the Energy Policies Act goal of authorizing over 10,000 megawatt of clean energy on public lands in 2012, 3 years ahead of schedule, the BLM has enhanced its permitting process and is currently developing a competitive leasing system for wind and solar resources.

True landscape-level strategies, like the Western Solar Plant and its energy zones, the BLM is simultaneously bringing billions of dollars in investment to the United States, and increasing our Nation's long-term energy security. We look forward to working with the sponsors and the committee on our shared goal of furthering geothermal, wind, and solar energy development, as we continue to protect our Nation's vital public lands and water resources.

H.R. 2004, Geothermal Protection Expansion Act of 2013, seeks to focus Federal geothermal energy leasing toward an entity who intend to develop those resources, rather than those with primarily speculative aims. More specifically, the bill aims to address potential disincentives caused by speculators who purchase Federal leases adjacent to parcels of land with existing geothermal development. To address this concern, the bill authorizes non-competitive leasing of land adjoined in Federal geothermal resources when a valid discovery is made, and the resources are shown to extend into unleased Federal land.

The BLM generally supports H.R. 2004, and would like to work with the committee on the bill's leasing provisions, timeline for establishing regulation, as well as measures which sets a minimum price on fair market value determination.

H.R. 1363, Exploring for Geothermal Energy on Federal Lands Act. H.R. 1363 would exempt certain geothermal proposal from environmental review as geothermal exploration test projects, and allocate the Secretary of the Interior just 10 days to review proposal and determine if they meet the criteria for such an exemption from the National Environmental Policy Act.

The Department opposes H.R. 1363 because it is inconsistent with sound and longstanding NEPA requirements for Federal actions. Failure to include NEPA review can result in a failure to provide relevant and useful information to the public and to the BLM, as a decisionmaker. The BLM currently provides for appropriate environmental review, and has already issued 818 geo-

thermal leases covering over 1.2 million acres of Federal land. NEPA review is a critical important component of this responsible development.

H.R. 596, Public Lands Renewable Energy Development Act of 2013. H.R. 596 aims to support renewable energy development on public lands, through the re-establishment of a special account for processing geothermal use authorization, the creation of a competitive wind and solar leasing program, and the establishment of a royalty system for wind and solar energy authorization.

Since this bill and the previous version were introduced, the Department has utilized administrative authority to efficiently expand solar, wind, and geothermal development opportunities on public land across the West. As part of this effort, the BLM is currently developing regulations similar to those in H.R. 596, which are necessary to begin competitively leasing utility-scale wind and solar projects in designated areas.

The Department supports the goals of H.R. 596, and would like to work with the sponsor and the committee on our shared objective: harnessing the vast renewable energy resources available on public lands, while continuing to ensure fair return to the U.S. taxpayer. We are excited about the committee's interest in improving the competitive leasing of renewable energy opportunity, and look forward to working together to ensure development occurs in the right place and in the right way.

Thank you for inviting the Department of the Interior to testify on these bills. I will be happy to answer any questions.

[The prepared statement of Mr. Nedd follows:]

PREPARED STATEMENT OF MICHAEL D. NEDD, ASSISTANT DIRECTOR, ENERGY, MINERALS AND REALTY MANAGEMENT, BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR ON H.R. 2004, H.R. 1363, AND H.R. 596

Thank you for the opportunity to present the views of the Department of the Interior on three bills pertaining to the development of renewable energy on public lands administered by the Bureau of Land Management (BLM): H.R. 2004, the Geothermal Production Expansion Act of 2013; H.R. 1363, the Exploring Geothermal Energy on Federal Lands Act; and H.R. 596, the Public Lands Renewable Energy Development Act of 2013. These bills seek to expedite the development of geothermal, wind, and solar energy projects on public lands managed by the Departments of the Interior and of Agriculture. This statement addresses the provisions relevant to the Department of the Interior (Department).

The Department and the BLM remain committed to responsibly mobilizing the tremendous renewable energy resources available on public lands, and share the committee's interest in identifying efficiencies in the development of those resources, consistent with environmental protection and public involvement in agency decision-making. We look forward to working with the sponsor and the committee to further geothermal, wind, and solar energy development while continuing to protect our Nation's public land and water resources.

RENEWABLE ENERGY DEVELOPMENT ON PUBLIC LANDS

As part of the administration's "All-of-the-Above" energy strategy, the Department has made the development of the New Energy Frontier on America's public lands one of its top priorities. Due in large part to a permitting process for renewable energy projects emphasizing early consultation with partners and stakeholders, in 2012, the BLM successfully accomplished the Energy Policy Act of 2005 (EPA) goal of authorizing over 10,000 megawatts (MWs) of renewable energy on public lands—3 years ahead of schedule. In support of the President's Climate Action Plan to ensure America's continued leadership in clean energy, the Department is now working to reach 20,000 MWs of permitted renewable energy capacity on public lands by 2020. The BLM is already making great strides toward achieving that goal, which would provide enough clean energy to power more than 6 million homes.

In 2009, there were no commercial solar energy projects on or under development on public lands. Since that time, the BLM has approved 52 renewable energy projects; including 29 utility-scale solar facilities, 11 wind farms, and 12 geothermal plants, each with associated transmission corridors and infrastructure to connect with established power grids. If fully built, these projects will provide more than 14,000 MWs of power, which will support approximately 21,000 construction and operations jobs.

The BLM recently announced it will prioritize 13 renewable energy projects (11 solar and 2 wind) in 2014 and 2015. The 13 projects represent approximately 3,030 MWs in potential clean energy. The recent successful auction of solar energy leases in the Dry Lake Solar Energy Zone in Nevada is also likely to result in additional projects and increased generation.

Renewable energy projects authorized by the BLM constitute a major contribution to not only the Nation's energy grid, but also the national economy. Projects on public lands have already garnered an estimated \$8.6 billion in total capital investments, and the potential for approved projects pending construction is estimated at \$28 billion. Through efficient and environmentally responsible permitting, the BLM is helping to bring tens of billions of dollars in investments to the United States.

The BLM intends to further these contributions by moving from an application-by-application approach for solar energy projects to a competitive leasing process in designated development areas called Solar Energy Zones (SEZs). In October 2012, the Department finalized a Solar Energy Programmatic Environmental Impact Statement, more commonly called the Western Solar Plan, which identified 17 SEZs and established a blueprint for utility-scale solar energy permitting with access to existing or planned transmission infrastructure. The Western Solar Plan also provides the foundation for the BLM's current rulemaking process to implement competitive solar and wind energy leasing within designated areas.

In authorizing existing projects, reviewing proposed projects, and developing a competitive leasing rule, the BLM has focused on managing renewable energy development in an accelerated but responsible manner which ensures the protection of signature landscapes, wildlife habitats, and cultural resources. This "smart from the start" approach is consistent with the administration's goal of authorizing safe and sustainable geothermal, wind, and solar energy projects on public lands. The BLM achieves these collaborative goals through close working relationships with local communities, state regulators, private industry, and other Federal agencies.

Under land use plans and environmental analyses informed by public involvement and early consultation with these partners, the BLM is leading the Nation toward the New Energy Frontier through active geothermal, wind, and solar energy programs.

BLM MANAGEMENT OF GEOTHERMAL RESOURCES

Geothermal energy resources on Federal lands are leased and managed in accordance with the Geothermal Steam Act (Steam Act) of 1970, which was amended by the EPAct. The EPAct made extensive changes to the Steam Act which were designed to encourage geothermal energy development and simplify the royalty structure. In 2008, the BLM and U.S. Forest Service (FS) jointly prepared and issued a Programmatic Environmental Impact Statement (PEIS) analyzing the potential for geothermal leasing on Federal lands. Based on this analysis and authorities under the amended Steam Act, the BLM and FS have made 193 million acres of Federal land available to geothermal development.

In 2007, the Department published geothermal energy leasing regulations to reflect the EPAct's amendments to the Steam Act. The updated regulations provide for more competitive geothermal leasing, simplified royalty calculations, and policies for the administration of leases. Currently, most Federal leases for geothermal are offered through competitive oral auctions held at least once per year. Since competitive auctions began in 2007, a total of 366 geothermal leases have been sold, generating more than \$76 million in revenue. In addition to the price paid at auction, geothermal lease holders pay an annual per-acre rental fee of \$2.00 per acre until production begins, along with a \$155 competitive lease processing fee. Thereafter, lease holders pay royalties or fees on production. Lease parcels that do not receive a bid at auction are made available for noncompetitive lease for a period of 2 years at a rental price of \$1.00 per acre. Noncompetitive leases are also offered to qualified mining claim holders.

Geothermal leases currently generate over \$15 million in Federal revenues each year, with 50 percent of total royalties shared with states and 25 percent shared with local counties. To date, the BLM has issued 818 geothermal leases covering 1.2 million acres of Federal lands. Approximately 71 leases have reached producing sta-

tus and currently hold a generating capacity of nearly 1,750 MWs. These producing leases account for more than 40 percent of the total U.S. geothermal capacity, and critically, often provide baseload power that does not have the variable qualities of some other renewable energy sources.

While the geothermal industry is still in its early stages, its future role and importance is expected to increase significantly. According to the Department's 2008 PEIS, geothermal production levels are projected to rise to an estimated 12,200 MWs by 2025. Through the BLM's management of existing and future projects, geothermal resources on public lands will make an increasingly important contribution to building the clean energy economy of the 21st century.

H.R. 2004, GEOTHERMAL PRODUCTION EXPANSION ACT OF 2013

H.R. 2004 seeks to focus Federal geothermal energy leasing activities toward entities that intend to develop geothermal resources rather than toward those who may intend to obtain leases for parcels with geothermal resources for speculative purposes. More specifically, the bill aims to address a practice whereby speculators purchase at auction Federal geothermal leases for parcels that are located adjacent to parcels of Federal or private land with existing geothermal leases or developments. This practice is viewed by some as an effort to capitalize upon another company's geothermal exploration efforts, and is a disincentive for future geothermal investment and development. Because the geothermal competitive leasing program is open to all qualified bidders, the potential exists for such speculative activity.

To address this concern, the bill authorizes non-competitive leasing of adjoining Federal geothermal resources when a valid discovery of geothermal resources is made, and the geothermal resources are shown to extend into unleased Federal land. Under the bill, a Federal non-competitive lease would be available only for areas not exceeding 640 acres that have not already been leased or nominated to be leased competitively. Only one noncompetitive lease could be issued for each valid geothermal discovery.

To qualify for a noncompetitive lease under the bill, an applicant would have to demonstrate, consistent with industry standards, a valid discovery of a geothermal resource. An applicant also would have to present sufficient geological and technical data showing that the geothermal resource extends into adjoining Federal lands.

Section 2 of H.R. 2004 would amend Section 4(b) of the Steam Act to define fair market value per acre for non-competitive leases. Under the provisions of Section 2, the lessee would pay fair market value for the non-competitive lease in accordance with regulations issued by the Secretary of the Interior. The bill would set a minimum price on how much the Secretary may determine the fair market value to be at not less than the greater of \$50 per acre, or four times the median amount paid per acre for all land leased during the preceding year.

The bill would make proposed fair market value determinations open for public comment for a period of 30 days and would allow a qualified lessee and any affected party to appeal a fair market value determination. Further, the lease awarded non-competitively would be assessed the annual rental rate of leases awarded competitively.

The BLM generally supports maintaining competitive leasing processes for the development of Federal energy resources but recognizes that there are situations in which non-competitive leasing may be appropriate, such as to increase investor confidence that geothermal discoveries could ultimately be fully developed. Additionally, the BLM supports a requirement that regulations be promulgated to establish procedures for determining the fair market value of leases on adjoining lands.

Specifically, H.R. 2004 would set a minimum price on the Secretary's determination of fair market values for geothermal leases. The BLM would consider a number of factors in identifying a price that is fair for a given lease, including information on known existing resources and the value of other leases within the local market. The BLM supports measures that help ensure a fair return to U.S. taxpayers for the use of public lands, and would like to work with the sponsor on this provision.

Finally, the BLM has concerns with the time frames included in the bill. Specifically, the promulgation of regulations issued by the Secretary typically requires more than 270 days. The 180 days provided in the bill for determining the fair market value of a lease may not be adequate to conduct such an evaluation.

H.R. 1363, EXPLORING FOR GEOTHERMAL ENERGY ON FEDERAL LANDS ACT

H.R. 1363 establishes criteria for "geothermal exploration test projects" and exempts a proposal meeting those criteria from NEPA compliance. The bill authorizes a geothermal leaseholder proposing to drill such a test project to notify the Secretary of their proposal 30 days prior to the start of drilling. The Secretary is

allowed 10 days within which to review the proposal and determine if it meets the criteria for exemption from NEPA, or to identify the reasons why the proposal does not meet the criteria and thus would not be exempt from NEPA. If the latter, the Secretary is required to notify the proponent of specific deficiencies and to give the leaseholder the opportunity to meet the criteria and thereby become exempt from NEPA.

The Department opposes H.R. 1363 because it is inconsistent with sound and long-standing NEPA requirements for Federal actions. Circumventing NEPA compliance for projects will undermine the reasoned consideration of the environmental effects of such projects and impede the opportunity to consider alternatives with less adverse impacts on communities and the environment. Failure to include NEPA review can result in a failure to provide relevant and useful information to the public and to the BLM as a decisionmaker.

Furthermore, its NEPA-exempt framework contains no exception for “extraordinary circumstances”—i.e., circumstances when NEPA review would still be warranted. The BLM believes the absence of an exemption for extraordinary circumstances may result in geothermal development that may pose an impact to the environment. The BLM is ensuring that development of geothermal resources on the public lands is implemented in an environmentally responsible manner. NEPA review is an important component of this responsible development.

H.R. 596, PUBLIC LANDS RENEWABLE ENERGY DEVELOPMENT ACT OF 2013

H.R. 596 aims to increase renewable energy development on public lands, primarily through the reestablishment of a special account for processing geothermal energy authorizations and the creation of a competitive wind and solar leasing pilot program. The bill would also establish a royalty system for wind and solar energy authorizations, create a conservation fund to address some of the impacts of wind and solar energy development on public lands, and require the Secretaries of the Interior and Agriculture to determine the feasibility of carrying out a mitigation banking program. The bill’s provisions are directed toward all public and National Forest System lands that have not been excluded from solar or wind energy development by a land use plan, Resource Management Plan, or Federal law.

Since this bill and previous versions were introduced, the Department has utilized administrative authorities to implement the Western Solar Plan and expand solar, wind, and geothermal development opportunities on public lands. The Department supports the goals of H.R. 596, and we are excited to work with the committee and the sponsor to further harness the vast renewable resources on public lands while continuing to ensure a fair return to U.S. taxpayers.

H.R. 596 would amend the EPAct to reestablish the geothermal special account, which expired in 2010, through Fiscal Year 2020 to provide funds for the processing of geothermal leases and use authorizations. Under current law, 50 percent of geothermal revenues are directed to the state in which the project is located, with the remaining funds divided evenly between the county in which the project is located and the Treasury. Under H.R. 596, the states would continue to receive 50 percent of geothermal revenues; while the BLM would receive an amount specified in advance appropriations acts from the total directed to the Treasury. The BLM estimates the proposed special account would generate \$4 million per year in funding for the program, which is currently supported by \$7 million in appropriated funds. The Department has generally proposed funding geothermal program operations through a combination of cost recovery fees and the regular appropriations process. We look forward to working with this committee and the Interior appropriations committees in evaluating funding options for the geothermal leasing program.

Section 202 of H.R. 596 would establish a pilot program for the competitive leasing of wind and solar energy sites on Federal lands. The bill requires the pilot program be established within 180 days of enactment and expanded to all covered lands within 5 years of enactment following a joint determination by the Secretaries of the Interior and Agriculture. Under the proposed pilot program, the Secretary would select one solar and one wind project within 90 days of the program’s establishment to be made available for development through competitive leasing. The section also outlines various competitive leasing requirements, including the payment of royalties, fees, and bonuses; lease terms and readjustments; and the issuance of regulations for reclamation and restoration bonding requirements.

The Department shares goals similar to those of Section 202 in the bill, and through its existing authorities, is currently developing a competitive leasing program for solar and wind energy projects on public lands. In 2012, the BLM completed its Western Solar Plan which designated 17 Solar Energy Zones (SEZs) and included the decision to proceed with competitive leasing for solar projects in those

areas. The BLM recently completed a successful competitive leasing auction in the Dry Lake SEZ in Nevada, which resulted in \$5.8 million in high bids. The BLM plans to build on the success of the Dry Lake auction, and anticipates publishing a proposed competitive leasing rule by the end of 2014. This rule will give additional detail to the competitive leasing program for the solar and wind energy programs. The BLM's current rulemaking process reflects the goals of H.R. 596 in implementing a competitive leasing process, and the agency would like to work with the sponsor and the committee on improvements to the proposed language.

The Department also shares the legislation's goal of capturing the fair market value of leased projects as part of its commitment to ensure an appropriate return to U.S. taxpayers. While the BLM currently ensures a fair return to the public from solar and wind energy authorizations through an annual acreage rent and MW capacity fee, the agency is also supportive of efforts which could improve and simplify how that return is captured. The Department is glad to work with the sponsor and the committee on exploring alternative ways to secure an appropriate return to taxpayers from solar and wind projects' use of public lands.

The Department is concerned, however, that the royalty system proposed under H.R. 596 would not provide a fair return from projects during periods without electric generation. We recommend the committee augment the legislation to include a revenue collection system covering all phases of project development and operation.

H.R. 596 would also require the development of a comprehensive inspection, collection, fiscal, and production accounting and auditing system by the BLM and Department's Office of Natural Resources Revenue. Replacing the existing annual acreage and MW capacity fee with the system necessary to accurately determine royalties would require the Department to collect, track, and audit significantly different types of information from what is currently collected. The Department would need additional time and resources to develop a robust royalty auditing system capable of ensuring a fair return. The Department looks forward to working with committee to determine the best way to meet the revenue capturing objectives of the legislation.

Finally, Section 204 of H.R. 596 provides for the allocation of royalty and bonus revenues from solar and wind energy leases to states (25 percent), counties (25 percent), a Renewable Energy Resource Conservation Fund (25 percent), the BLM or Forest Service (15 percent), and the U.S. Treasury (10 percent). Currently, all such revenues from solar and wind energy authorizations on public lands go to the Treasury.

CONCLUSION

Facilitating the responsible development of renewable energy resources on public lands remains a cornerstone of the administration's broad energy strategy. The Department and BLM both support efforts to safely advance geothermal exploration and renewable energy opportunities on public lands, and we look forward to working with the committee and sponsors of the legislation on these shared goals.

Dr. GOSAR. Thank you very much for your statements. We will now begin with questions. Members are limited to 5 minutes, but we may have some additional rounds. I will recognize myself for the first round of questions.

Mr. Wilson, thank you so very much for traveling all the way from La Paz County out here to Washington, DC. Under the current process, most counties get little to no money from solar and wind power generation that takes place within their borders. Energy development on public lands takes a toll on your county roads, requires the use of precious water resources, can disturb scenic views. Federal lands are also not taxable.

I know you touched on this in your testimony. But, given these factors, doesn't it make sense that local governments receive a share of the revenues from the sale of energy production that takes place within their borders?

Mr. WILSON. Mr. Chairman, Representative Gosar, it makes absolute sense. The counties are mandated to provide certain services

to their citizens, including public safety, health and public welfare. Providing those services all take money. And the additional burden placed by these industries on lands that don't pay taxes is a critical part of being able to adequately provide those services to our residents.

Dr. GOSAR. So also, the expedited permitting process, how would that help the counties?

Mr. WILSON. Mr. Chairman, Representative Gosar, as stated by Mr. Fitzer, Arizona wants to be the solar capital of the world. The state and counties have all taken steps to expedite processes and make sure that everybody is aware that we are open for business. And part of that is expediting our internal processes so that businesses can be responsive, and the county government can be responsive to the need of those businesses.

We recently had an industrial client that needed a re-zone. And with advertising and other requirements, we were able to get that re-zone through the entire process in less than 2 months. That is the kind of responsiveness that we would like to see from all aspects of government, if possible.

Dr. GOSAR. So, it really helps creating an environment for jobs, right?

Mr. WILSON. Absolutely.

Dr. GOSAR. Got you. Now, some of the revenues that are returned to the county, would some of these be used for education?

Mr. WILSON. Mr. Chairman, Representative Gosar, I would anticipate that most of the revenues at this point would probably go for infrastructure. Cost shifts and sweeping of funds that have occurred in Arizona have severely impacted the county's ability to maintain roads. And we are pretty much behind the eightball. Our public works fleet of small vehicles right now all have over 200,000 miles on them. Those vehicles are going to need to be replaced. We have county roads where we have had to extend grading and maintenance schedules. We need to get caught up on those.

There is no doubt in my mind education in Arizona does need some help, but it is not a mandated service of the county at this point, and we need to focus on those mandated services.

Dr. GOSAR. But it returns the revenues to the county that they can have jurisdiction on where to appropriate those funds.

Mr. WILSON. I am sorry?

Dr. GOSAR. So it will appropriate the funds back to the county, so you will have the dictation of where those funds go.

Mr. WILSON. Yes.

Dr. GOSAR. Got you. Mr. Fitzer, can you elaborate on how H.R. 596 will help Arizona become that solar capital of the world? We kind of want to move Germany on out of there.

Mr. FITZER. Mr. Gosar, basically, when you look at the amount of Federal and public lands in Arizona, and you look at our development pattern, specifically around the Phoenix Metropolitan Area, and even others, the state, you start pushing out into a lot of areas that are federally controlled, state controlled, and so forth.

When you start looking at needed infrastructure, specifically for power, transmission, and so forth, you always end up touching public lands. With the push-out of our development patterns, you will start seeing these public lands become more viable, suitable, and

more needed for this type of infrastructure, specifically solar development.

Dr. GOSAR. So this would actually incentivize states and counties, because they are sharing in the revenue, to help expedite, but also be very cognitive of the streamlining process. Wouldn't you agree?

Mr. FITZER. Yes, Mr. Gosar. And, in fact, when I worked for a community, we always tried to keep all the development within our community, so that we could get the taxable property, basically, the secondary property tax, and so forth, for those.

And, in fact, when we had developers come to us at the time, because we weren't able to share in royalties, we would actually try to get them over to private lands, as opposed to any type of public land. What this bill does is actually incentivize the state, local communities, the counties, and so forth to development of public lands, because they are able to share in those royalties, as well as Mr. Wilson stated, be able to pay for infrastructure.

Dr. GOSAR. Thank you very much. Mr. Huffman, you are up.

Mr. HUFFMAN. Mr. Chair, I have to take exception with this idea of Arizona as the solar capital of the world.

[Laughter.]

Mr. HUFFMAN. I think that title is going to go to California. But other than that one difference, I want to commend you for doing a great job and working in a bipartisan way on a very worthwhile endeavor with this bill, and I have no questions at this time.

Dr. GOSAR. I would like to recognize the gentleman from Montana, Mr. Daines.

Mr. DAINES. Thank you, Mr. Chairman. First of all, I ask unanimous consent to enter two letters in the record. The first is from the Montana Association of Counties, another one from sportsmen's groups in Montana, including the Montana Backcountry Hunters and Anglers, Montana Ducks Unlimited, Sportsmen Alliance, Trout Unlimited, Wildlife Federation, Pheasants Forever, Bearpaw Bowmen, Gallatin Wildlife Association, and the Helena Hunters and Anglers.

Dr. GOSAR. Without objection, so ordered.

[The information submitted by Mr. Daines for the record follows:]

MONTANA ASSOCIATION OF COUNTIES,
HELENA, MT,
MAY 20, 2013.

Hon. STEVE DAINES,
U.S. House of Representatives,
206 Cannon House Office Building,
Washington, DC 20515.

DEAR REPRESENTATIVE DAINES:

We are writing to convey our support for the Public Lands Renewable Energy Development Act (H.R. 596), which you have cosponsored in the House. This legislation proposes to return to counties across the country a portion of the royalty revenues from renewable energy leases on Federal land. We commend the proposed leasing system that shares royalty revenues from renewable energy projects on Federal land with the states and counties. This provision is extremely important to counties because they absorb additional staff time and capital costs from permitting and siting these types of developments. Currently, the only forms of reimbursement counties receive from Federal lands are the Payment in Lieu of Taxes (PILT) and Secure Rural Schools and Community Self Determination Act (SRSCSDA) funds,

which are subject to sequestration and have not yet been reauthorized for Fiscal Year 2014.

With this recognition of an uncompensated increased burden on counties and by returning revenue to the counties through renewable energy lease systems, this legislation will support county governments in affected areas with delivering critical government services and making critical infrastructure improvements in support of these activities. The Montana Association of Counties continues to support responsible development of renewable energy projects and the resulting job growth for our local communities. The shared revenue from renewable energy development projects can be used by counties to support land, wildlife, and water management issues in affected areas. We would like to thank you for cosponsoring this important and timely piece of legislation and encourage you to move this Bill through the legislative process this session. Montana counties are willing and eager to help meet the growing energy needs of the Nation, while ensuring our local communities receive the vital resources they desperately need.

On behalf of the Montana Association of Counties,

L. HAROLD BLATTIE,
Executive Director.

AUGUST 13, 2013.

Hon. STEVE DAINES,
*U.S. House of Representatives,
504 Cannon House Office Building,
Washington, DC 20515.*

DEAR CONGRESSMAN DAINES:

We thank you for your support of the Public Lands Renewable Energy Development Act (H.R. 596). The below groups represent thousands of Montana hunters, anglers, fish and wildlife professionals, and outdoor enthusiasts who applaud your co-sponsorship of this bi-partisan and responsible bill. Sportsmen and outdoor recreationists are supportive of the development of clean, renewable energy resources on public lands, as long as it is done in the right places and in a deliberate manner that conserves fish and wildlife habitat and recreational opportunities.

The Bill's revenue sharing model, which includes a conservation fund to benefit our public lands, balances our Nation's need to both develop clean energy and protect our wildlife resources. Hunting and fishing opportunities will be strengthened by the conservation fund, making this bill a win-win approach to energy development. The Public Lands Renewable Energy Development Act would help wind and solar development move forward on appropriate public lands in a way that sustains Montana's unparalleled sporting heritage.

We encourage you take any actions that you can to help move the Public Lands Renewable Energy Development Act through the legislative process. Again, we thank you for co-sponsoring this important bill and we look forward to working with you as this legislature moves forward.

Sincerely,

MONTANA BACKCOUNTRY HUNTERS AND ANGLERS
MONTANA DUCKS UNLIMITED
MONTANA SPORTSMEN ALLIANCE
MONTANA TROUT UNLIMITED
MONTANA WILDLIFE FEDERATION
MONTANA PHEASANTS FOREVER
BEARPAW BOWMEN
GALLATIN WILDLIFE ASSOCIATION
HELENA HUNTERS AND ANGLERS

Mr. DAINES. This is a question for Chris Wood. You have the best job in the world there, the head of Trout Unlimited. As somebody who grew up fly-fishing before Brad Pitt discovered it in Montana, in fact, I remember when my grandpa would take me out with my

Browning SilaFlex rod and automatic reel, and I only knew that two flies existed then. It was a Bitch Creek and a Woolly Bugger. I had no idea there were all these other SKUs out there. But thanks for coming today.

Well, as a Montanan and an avid sportsman, I understand how public land use, whether it is outdoor rec, ranching, farming, or logging, are critical to our way of life in Montana. And we have had the debate here on which is the sunniest state. I will say they call it Big Sky Country for a reason to my two distinguished colleagues.

Besides our livelihoods, though, public lands and our rivers and streams also support an unmatched and diverse array of wildlife and unparalleled natural beauty. And in Montana, like most Montanans, we believe we can do both: responsibly develop natural resources, while preserving our outdoor heritage, and the reason we love to call Montana home. H.R. 596, the Public Lands Renewable Energy Development Act, is important to achieve that end.

So, Mr. Wood, besides some of the best fishing and hunting in the country, Montana's national forests, according to the National Renewable Energy Laboratory, have the potential to produce more than 8,000 megawatts of wind energy. In Montana forests, we are also proud to have some of the best fishing and hunting in the country. If renewable energy development takes place on public lands in Montana, how would H.R. 596 help to balance that development which we all strive to achieve with our great fishing and our hunting?

Mr. WOOD. Well, thank you, Mr. Daines. I will say that, since we are a fair bit of distance away from really great trout fishing here, I will extend to you the same invitation I extended to Mr. Gosar yesterday. And if you would like to go search out 40-pound catfish in the Potomac with me, we would be happy to take you.

[Laughter.]

Mr. DAINES. I won't comment on that.

Mr. WOOD. OK. I have video evidence, if you would like to see it.

Mr. DAINES. Sounds exciting.

Mr. WOOD. There is, you are absolutely right, there is a tremendous opportunity to both develop renewable resources on public land, and to do it in a way that actually enhances fish and wildlife habitat and hunting and angling opportunity. I could go through, literally, dozens of projects that we have been active in Montana.

One of my favorites was in the Middle Clark Fork drainage on Nine Mile Creek. This is a drainage that had been historically severely impacted by placer mining. And we were able to go back in there and work with a whole array of partners, including the Forest Service, to reconstruct that stream channel, that tributary to the Middle Clark Fork River. And, literally, days after the construction equipment left we had native populations of West Slope cutthroat trout making their way back up into the headwater system to spawn, and they hadn't been there in 60 years.

And right now, so much of what we are doing on public lands relative to energy development, but all forms of development, is essentially overseeing loss. This conservation fund actually gives us a chance to get ahead of the curve and to focus on restoration and actually recovery, and bringing back species and increasing and en-

hancing hunting and angling opportunity. It is a very unique and once-in-a-lifetime opportunity.

Mr. DAINES. Thanks, Mr. Wood. Appreciate that. This is a question for Mr. Wilson, the National Association of Counties. And we have had great support, certainly, from our county leaders back in Montana on this bill.

How would H.R. 596 help our counties better manage its resources and provide essential government services to citizens?

Mr. WILSON. I am sorry. Mr. Daines?

Mr. DAINES. Yes, right.

Mr. WILSON. H.R. 596, through the revenue sharing, obviously, to both state and the counties—I am a little lost on where your question went, I am sorry.

Mr. DAINES. Just how would this bill help our counties, in terms of delivering services for government?

Mr. WILSON. Well, one aspect that applies in La Paz County that I am sure applies to most state land counties, although 77.2 percent of our land is federally owned and non-taxable, actually only about 5.3 percent of our land is privately held, with tribal entities holding part of it.

In essence, what that has forced is kind of a rural sprawl, with private lands separated throughout the county. The infrastructure needs between those pockets would be supplemented by the development of those properties. So, not only would it create jobs, but it would provide additional funds and locations where infrastructure would be developed, to the advantage of both the energy company, the energy projects, and our local residents.

Mr. DAINES. Yes, thanks. My time is up. I will say that one of our challenges back in Montana, where we have these small communities surrounded by public lands, and there is no tax base there. So this allows these revenues, these royalties, in to help fund their infrastructure and so forth. It is critical right now for many of our counties across Montana. So thank you.

Mr. WILSON. Yes. And I think the word I was looking for was connectivity between those communities.

Mr. DAINES. Right.

Dr. GOSAR. I thank the gentleman from Montana. The gentleman from New Jersey, Mr. Holt, is acknowledged for 5 minutes.

Dr. HOLT. Thank you, Mr. Chairman. Mr. Nedd, let me begin with you. Let's clarify for the record whether the BLM already has the ability to use categorical exclusions to approve geothermal test wells. If so, how often are they used? And how long does an environmental assessment typically take?

So, three questions there. The first one is yes or no.

Mr. NEDD. Yes, we do have authority to use categorical exclusions. In terms of CXs being used, since 2008 there have been about 88 applications for a variety of geothermal exploration, and 59 of those applications, categorical exclusion or some other form of expedited process was used. But 67 percent of the time categorical exclusions are used.

And the third question?

Dr. HOLT. Typical time.

Mr. NEDD. Typical time? It could be a few months and more complicated may take a year. But normally a few months is what it will take, less than 90 days.

Dr. HOLT. Do you happen to know the shortest you have done and the longest you have had?

Mr. NEDD. Ninety days has been the shortest.

Dr. HOLT. OK. And I guess there are some that are still pending.

Mr. NEDD. There are some still pending.

Dr. HOLT. Yes, OK. What would you say about the steps you have taken, the progress you have made in siting renewables on public lands? In particular, given the success of the Dry Lake Solar, the zone auction, do you think pilot programs in the bill are necessary?

Mr. NEDD. Congressman, certainly we have learned from the Dry Lake Solar. Having defined lands and being able to configure parcels of the right size and with industry interest, competitive leasing is done and it is successful. So, again, we believe we have existing authority to do that, and have done that.

Dr. HOLT. Thank you. Mr. Wood, let me ask you. There might be others who can answer this. But what lessons have we learned from oil and gas development on public lands? Should renewables, large-scale renewables here, follow the same pattern? Should they have a different procedure?

Mr. WOOD. Representative Holt, I think the overriding lesson that we have learned, at least from a Fish and Wildlife perspective when it comes to traditional energy development, is to look at as large a landscape as you can before you actually begin to develop, and think in advance about how you will mitigate the effects of that development. And I think this bill—

Dr. HOLT. We are or are not doing that?

Mr. WOOD. I think we are doing a much better job of doing that now. There were leasing reforms that were proposed by the BLM, including a concept called “master leasing plans” back in 2008, 2010. Frankly, the BLM was a little bit slow to get off the dime on those, but they are doing better now, and we are getting better decisions as a result of that.

Dr. HOLT. In a minute-and-a-half left with six panelists, let me ask if you could do one thing for us to promote renewable energy on public lands, what would that be? Some of you have alluded to that in your testimony. But if you could give a succinct statement, I would appreciate it. Let’s just go from my left to right, please. Actually, seven.

Mr. WILSON. The thing that comes to my mind is some assurance that PILT will be funded ongoing, and that the revenues from this bill will supplement and not offset PILT payments.

Mr. NICHOLS. Representative Holt and members of the committee, first and foremost would be to make more lands available non-competitively for geothermal development. Second is to streamline—

Dr. HOLT. Let’s limit it to one thing. We don’t have the time. I am sorry, thank you.

Mr. HAUBENSTOCK. Two quick things. One is the commence construction for the ITC and, second, thank you for the indulgence, but

permitting consistency and certainty in the bill that Representative Gosar does much to forward that. Thank you.

Mr. WOOD. Pass H.R. 596.

Dr. HOLT. OK. That is succinct, thank you.

Mr. FITZER. Reduce the risk to the development community and create a process for them to go by.

Dr. HOLT. I am sorry. What does that mean?

Mr. FITZER. Well, basically, give them a process with which they know the time frames, they know what they are getting into.

Dr. HOLT. Thank you.

Mr. HUNTLEY. Build new partnerships, like is envisioned in H.R. 596, by creating a source of returns for local communities and stakeholders that right now only see the impacts of development, but not the benefits.

Dr. HOLT. And Mr. Nedd, on—

Mr. NEDD. Congressman—

Dr. HOLT. Are you prepared to give one thing on behalf of BLM?

Mr. NEDD. I would just say continue to allow us to use our existing authority, as done in FLPMA, to allow us to work with partners.

Dr. HOLT. Thank you. Thank you, Mr. Chairman.

Dr. GOSAR. I thank the gentleman. I yield to the gentleman from Idaho, Mr. Labrador, for 5 minutes.

Mr. LABRADOR. Thank you, Mr. Chairman. For far too long, the Federal Government has imposed regulatory burdens that have impeded economic growth and limited our access to domestic energy. To help reduce this burden I have introduced H.R. 1363, the Exploring for Geothermal Energy on Federal Lands Act.

In Idaho and across the West, there is an abundance of geothermal energy potential that is unavailable, due to Federal bureaucratic impediments. In Idaho alone, geothermal has the potential to generate more than 800 megawatts. Current law requires each geothermal exploration hole to go through an individual environmental review and approval process, discouraging energy companies from investing in projects, and curtailing our access to geothermal energy.

Each individual environmental review process can take from 10 months to 2 years to complete. My bill would create a streamlined policy for the development of clean geothermal energy resources that will create jobs and provide low-cost energy to American families. I am proud to have Scott Nichols from U.S. Geothermal, Incorporated here to testify on the bills before us, including H.R. 1363. Scott and U.S. Geothermal, Inc. operate out of Boise, Idaho, and I am happy to welcome him here today.

I am glad you are here, Mr. Nichols. Thank you for making the trip. And, Mr. Nichols, I have a few questions for you. You stated in your written testimony that the BLM has chosen to exclude geothermal exploration for categorical exclusions. Why has the BLM chosen not to apply existing directives, such as the CEQ regulations to give geothermal exploration a categorical exclusion?

Mr. NICHOLS. Mr. Chairman, Representative Labrador, I can't answer the question as to why those decisions are not being made at the Federal level. I believe that the staff in our agencies on the ground want to do the best job they can do, and I believe they are

compelled, either through concern for legal actions and mandates through offices, the Federal offices here in Washington, requirements that they don't have control over to interpret their rules and regulations in the most stringent manner available.

Mr. LABRADOR. So you think that the main reason is that they are concerned about litigation?

Mr. NICHOLS. Yes, sir.

Mr. LABRADOR. OK. You state that existing regulations dictate that BLM will not issue leases for any lands where the lease would cause unnecessary or undue degradation of public lands or resources. If a lease has been issued, why then would the lease be subject to a NEPA analysis?

Mr. NICHOLS. Representative Labrador, the leases are subject to environmental impact statements and environmental assessment prior to leasing. And that is a question we also have with regard to individual drilling operations within a lease.

It is actually stated within the regulations, the BLM regulations, that leases may not be issued for areas where the agency has determined that those leases would result in unnecessary and undue degradation.

Mr. LABRADOR. So if they gave you the lease, they already made the determination. And then, when you try to explore the lease, they are saying that you have to go through that whole process again?

Mr. NICHOLS. Yes, sir.

Mr. LABRADOR. The Energy Policy Act of 2005 established several categorical exclusions that apply only to oil and gas exploration and development. If we are truly trying to avoid picking winners and losers in the energy industry and allow other forms of energy to compete fairly, shouldn't we just be able to apply similar categorical exclusions to the geothermal industry?

Mr. NICHOLS. I think there should be similar categorical exclusions. The bill that you have worked on represents an excellent first step. We don't need large acreages, as oil and gas might. But we feel those equivalent acreages and the surface disturbances associated with those acreages are very valuable to our exploration and development.

Mr. LABRADOR. OK. Mr. Nichols, does H.R. 1363 allow geothermal development in pristine areas that are currently off limits to energy exploration?

Mr. NICHOLS. No, sir. That does not open those lands up for exploration.

Mr. LABRADOR. OK. So all you want is a common-sense approach, and to be treated in a way that you don't have to repeat the process every single time you want to dig a hole. Right?

Mr. NICHOLS. That is correct. Thank you, sir.

Mr. LABRADOR. All right, thank you very much. I yield back my time.

Dr. GOSAR. Thank the gentleman, and I recognize the gentleman from California, Mr. Lowenthal.

Dr. LOWENTHAL. Thank you, Mr. Chair, and I too want to commend you and offer my support on your bill, H.R. 596, promoting the development of renewable energy on public lands. I think it is a great bipartisan effort.

My questions are to Mr. Nedd. The current statutory minimum bid for an oil and gas lease is \$2 an acre. Is that not true?

Mr. NEDD. Yes, it is, Congressman.

Dr. LOWENTHAL. And it has been that way for 25 years?

Mr. NEDD. It has.

Dr. LOWENTHAL. What was the minimum bid you established for your competitive solar sales?

Mr. NEDD. Congressman, there are a variety of things that go into solar, and so in a competitive lease we are looking at the rental fees and a number of other factors.

Dr. LOWENTHAL. So there is no minimum bid. Is that what you are saying?

Mr. NEDD. There is no minimum bid.

Dr. LOWENTHAL. Well, let's follow up. How much money did the BLM bring in through all the solar and wind right-of-way rents in Fiscal Year 2013?

Mr. NEDD. Congressman, I would have to get back to you with the exact for 2013.

Dr. LOWENTHAL. My understanding was that it was approximately—a little over \$10.5 million, was what it was. And did you know how much you brought in when you did do the competitive auction in the one Dry Lake, Nevada competitive auction?

Mr. NEDD. I believe it was about \$5.8 million.

Dr. LOWENTHAL. That is right. So this one competitive auction you brought in more than, in my understanding, more than half of what the BLM received from all of the other rights-of-way in the entire country.

Mr. NEDD. I believe that is correct. This was over \$10 million received for all of them. So I believe that is correct.

Dr. LOWENTHAL. So I am very impressed with that. And you are moving.

But I do want, while we are on the subject of revenues from public lands, and you are here with us today, I want to take this opportunity to ask you about our system of oil and gas rents and royalties. As you know, BLM charges a 12.5 percent royalty for onshore oil and gas leases, which is significantly lower than almost every other western state, lower than the Interior charges for offshore leases on the Outer Continental Shelf.

And I understand that the Department has estimated that if you raised onshore rates to the same level as the offshore rates, the taxpayer would receive \$1.25 billion in additional revenues over 10 years, and half of that would go back to the states. While the Mineral Leasing Act sets a floor on the royalty rate, does the Department already have the authority to raise the onshore royalty rate right now?

Mr. NEDD. Certainly the Department does, Congressman.

Dr. LOWENTHAL. So, you are working on an ANPR, an advanced notice of proposed rulemaking, to look at that question. And I am aware of the intent to release this ANPR, to raise these royalty rates, was first announced by Secretary Salazar back in 2009. It has now been 5 years later, and we still don't have an ANPR, which, you know, doesn't even require an actual rule to be proposed. Is there any timeline for publishing that ANPR?

Mr. NEDD. Well, Congressman, there has certainly been a lot of discussion of looking at a fair return to the American public. And while I don't have all the facts here, I know that senior policy-makers have considered the timing of that. But to give you an exact time here, I cannot.

Dr. LOWENTHAL. Well, I don't think it should take very long to publish what is effectively just a list of questions for stakeholders to respond to in an ANPR. I am working with my colleagues on a letter to Assistant Secretary Schneider that asks the BLM to raise our onshore royalty rates to ensure that American taxpayers receive the fair value for their extraction of our public resources. And I hope the BLM and Interior will move forward on the long-overdue modernization of our oil and gas facilities. And I yield back.

Dr. GOSAR. I thank the gentleman from California. We are going to do a second round. And, with that, I am going to acknowledge the Ranking Member, Mr. Holt, for his 5 minutes.

Dr. HOLT. Thank you, Chairman Gosar.

Let me start with you, Mr. Haubenstock. You express concern about speculators getting involved in the competitive bid situations. The bill before us would require potential bidders to submit a plan of development. Wouldn't that discourage just empty speculation?

Mr. HAUBENSTOCK. It would certainly help in that respect, Congressman. And thank you for the question. We are concerned that, as we have seen with some other technologies, that there has been speculation. And we are, moreover, concerned that competitive bidding does not promote the kind of innovation that is needed in order to provide a stable least emissions, least cost, and most reliable energy supply.

I can go further if you have time, but one of the concerns that we have, as a Nation, is the energy supply system is going through what one public utilities commissioner referred to recently as a sea change. The need for innovation in order to maintain reliable energy supply to reduce costs, and to ensure that we achieve our emissions goals is critical. And competitive bidding tends to forward the least risk technologies, those that have been the most deployed.

That is very helpful, and the costs, certainly for solar, have declined tremendously. But the opportunity to innovate, to provide storage, to ensure that solar can maximize the extent to which it can solve these problems, and solar has the opportunity, working with many other technologies, to help provide a clean, reliable, sustainable energy supply for the Nation, is critically important.

Dr. HOLT. Do any of the other witnesses have any comment on whether this would result in the least innovative technology?

[No response.]

Dr. HOLT. Well, let me move on, then. Mr. Huntley, can you describe some of the inherent problems that come from issuing right-of-way versus leases for renewable energy?

Mr. HUNTLEY. Thank you, Ranking Member Holt. I can report back to you on what some of the available evidence suggests. There really are two challenges that we think the industry confronts under the right-of-way-based system, the first of which is that rights-of-way are typically used for smaller projects: communication

towers, irrigation ditches, and linear infrastructure; not large, single projects with a big footprint.

We think that the right-of-way is just not a good fit for the kind of infrastructure we are talking about with large wind and solar facilities.

But perhaps more importantly, and I think what industry watchers and others have commented on, as I detail in my written statement, is that under the right-of-way system, the agency retains significant discretion to change the terms of the right-of-way use authorization over time, whereas, in a more traditional lease-based system, that which is used for virtually every other form of energy production on public lands, there is greater certainty provided to industry and all stakeholders in the form of a lasting verbal commitment of 20, 30 years, in the form of a lease.

Dr. HOLT. Mr. Nedd, as I understand it, less than 10 percent of all BLM lands have been surveyed for historic and cultural resources in the last quarter of a century, actually more. Is it true, as I believe, that the lack of cultural surveys on these lands, as required under the National Historic Preservation Act, creates less certainty for the protection of the resources?

Mr. NEDD. Congressman, while I don't have the exact percentage, I do know it is a factor in determining impact on any type of project. So, yes, I think that would be a part of that.

Dr. HOLT. Historic preservation is a factor, but the data are not necessarily there.

Mr. NEDD. That is true.

Dr. HOLT. OK. Does the Bureau suggest a change in that respect, then?

Mr. NEDD. Well—

Dr. HOLT. To see that the data are there.

Mr. NEDD. Well, as part of our NEPA process, the BLM would conduct cultural-type surveys or inventory to determine what impact would exist there. So, I think that is part of our process, Congressman.

Dr. HOLT. And why are the surveys generally not done?

Mr. NEDD. Say again.

Dr. HOLT. Why are the surveys generally not done?

Mr. NEDD. I don't understand your question.

Dr. HOLT. You think they are generally done, the surveys?

Mr. NEDD. Cultural surveys are done as part of the NEPA process.

Dr. HOLT. I see. Well, my time has expired. I will pursue that more later. Thank you.

Dr. GOSAR. I thank the gentleman. I am going to acknowledge myself for 5 minutes.

Mr. Nedd, my colleague from California highlighted the competitive bid about what was successful about the Dry Lake in Nevada. Can you tell us a little bit why it was so successful in that bid process?

Mr. NEDD. Yes, Congressman. Certainly the market readiness was greater in the Nevada Dry Lake area. The second thing we understood was the size of the parcels. In the Dry Lake we spent a lot of time hearing and understanding from the stakeholders, and so we were able to configure parcels at the right size. The third,

I believe, was some of the mitigation costs were understood and known. So, I think those factors contributed to the success.

Dr. GOSAR. So do you agree that, in the competitive lease process, it hinders the ability for innovative type technology?

Mr. NEDD. Congressman, what I would say, in a competitive process it allows a fair return to the American taxpayer, and there are a number of factors in there that I couldn't comment that it hinders it.

Dr. GOSAR. So if you are looking at qualified bidders, if you are making that part of your contract, to look at what they are going to look at in this bid process, the proposed process, how they are going to put it into work, that actually gives you a lot of foresight into what a company is actually going to do. Does it not?

Mr. NEDD. I believe it allows us to see some of that, yes.

Dr. GOSAR. Yes. From your lessons that you saw in these competitive bids, is there anything that you would change or would like to have Congress highlight so that it expedites this, but make it responsible?

Mr. NEDD. Again, the Bureau is going through to develop its regulation to ensure the rules and the process is understood.

Again, under the FLPMA authority, we believe it allows us to do that. And so, it would be a matter of allowing the Bureau to move forward and complete its regulatory process.

Dr. GOSAR. I appreciate it.

Mr. Haubenstock, looking at the competitive bids I was outlining here in contract—before this I was a dentist, so contracts are pretty self-explanatory quite a bit. But if you are qualifying bidders based upon what they are coming to the table with, and foresight, doesn't that rectify some of the aspects that you have reservations about in H.R. 596?

Mr. HAUBENSTOCK. It does certainly help reduce the extent to which there is speculation. It may not solve all of the problems, and we certainly look forward to working with your staff to help address these.

But we do remain concerned that competitive bidding and the royalties tend to reduce the extent to which the solar industry can innovate and meet the challenges of the future, and to do so at least cost.

There is a question of risk and there is a question of how all these factors work together. So the Dry Lake Solar Energy Zone was a great example of when the stars align, including the sun, including transmission, including a market that was ready for those kinds of technologies, and the opportunity for that maturing sector of the solar industry to take advantage of it.

But we are in a very changing environment, and we don't expect that that experiment is going to necessarily repeat across all the solar energy zones.

Dr. GOSAR. But I think, from the standpoint that what we have done in this bill is collaborating from local, state, Federal, all partners, I think the collaborative bills, what Mr. Wood was talking about, is a master plan where a master conversation is occurring, which has not been done in the past.

Mr. HAUBENSTOCK. And that is a very helpful portion of the bill, Congressman, and we do very much appreciate that. We support

the notion of revenue-sharing with state and local governments, we think that is very important. There certainly are state and local governments that are receiving tax revenues, even from solar projects on Federal lands.

So, there is a lot that is being contributed now. But there are impacts from solar energy projects that could be helpful to be shared with state and local governments to share the revenue so that they can help address those more disparate impacts.

Dr. GOSAR. Mr. Huntley, I know in your testimony you highlighted looking at this collaborative venture, because a lot of times, when you have support from the ground level, it really promotes the idea of an exchange so that there is buy-in, it has a reward of working.

Give me a few more words in your regards to how you see that facilitating and expediting the bill with H.R. 596.

Mr. HUNTLEY. Thank you, Congressman. Mr. Haubenstock, in his oral statement, brought up a really important concept, the idea of a return on investment. I think that is really the cornerstone of what holds collaborations together, when all parties have a stake in seeing a certain action go forward.

What has concerned us to date is that not all stakeholders—all users of the public land, all of the recreation groups, hunters, anglers, others—necessarily see direct benefit coming from development and deployment of renewable energy on public lands. H.R. 596 would create a return, not just for local governments, both counties and states, but it brings other stakeholders to the table that, at best, have been reluctant to engage, and perhaps rightfully so, because all they see are the impacts.

Dr. GOSAR. Respecting their voice, they are sitting at the table, so reward.

I yield to the gentleman from California, Mr. Huffman.

Mr. HUFFMAN. Thank you, Mr. Chair. I want to ask a question of Mr. Nichols, if I could, about the geothermal bill, H.R. 2004. You may know, Mr. Nichols, I have one of the largest geothermal facilities in the country in part of my district, the geysers in Sonoma, and then part of Mr. Thompson's district in Lake County. So I want to see geothermal development succeed, I am a big fan.

And I wanted to ask your thoughts on the 1 square mile provision. Based on your experience, is this enough acreage to allow developers to effectively expand on their investment and succeed into that non-competitive lease provision?

Mr. NICHOLS. Mr. Chairman, Representative Huffman, thank you for that question. I am proud to say that U.S. Geothermal just acquired property in the geysers, and we are working diligently to bring that property into production. I look forward to being on that property more often.

That being said—

Mr. HUFFMAN. Watch out for rattlesnakes.

Mr. NICHOLS. I have been told so. That being said, 640 acres has been discussed among the industry folks for a number of years. While it is not a large parcel of ground, we felt it was adequate that a developer with a known resource could selectively acquire the necessary land they felt they needed with that additional provi-

sion. It is a very focused, small provision on a one-time basis, and would provide a premium rent to the BLM.

Mr. HUFFMAN. OK, thank you for your answer. I would like to ask Mr. Huntley about some potential confusion in H.R. 1363. I want to be as clear as I can be on this issue of whether the bill, the text of the bill creates a new categorical exclusion, or just draws a distinction between an EIS and an EA.

What is your reading, specifically, of the bill? Do you think it creates a categorical exclusion? Or do you think it goes too far?

Mr. HUNTLEY. I appreciate the question. In talking with attorneys both at my organization and at partner organizations, it took us a little while to come up with a conclusion on exactly what the legislation did.

We appreciate the aims, and any effort to promote renewable energy development. Renewable energy development on public lands is worthy of consideration. The concern that we drew from the language is that it did not appear to create a categorical exclusion, nor to necessarily waive any particular environmental review requirement. Instead, it seemed to put a brick wall at the point at which additional environmental review and consultation seems to be needed the most. That is, if an agency, through initial review, finds that there are likely to be environmental impacts, it can't go any further.

So, perhaps only because there are multiple readings on the bill, but in our view there is a substantive impact that may not be what was intended by the bill's authors to——

Mr. HUFFMAN. All right. So you think some additional work may be in order on that, to clarify that provision. Thank you.

If I could, Mr. Chair——

Dr. GOSAR. Yes.

Mr. HUFFMAN [continuing]. I would like to yield the balance of my time to Ranking Member Holt, because I think he was running short when he ended his last line of questions.

Dr. GOSAR. Certainly can.

Dr. HOLT. Thank you. Let me collect my thoughts here, then.

I wanted to follow on Mr. Gosar's earlier question about the success, Mr. Nedd, about the success of the Dry Lake Solar auction. The previous auction in Colorado was not so successful, I think. Could you explain the difference? Am I correct that there was a difference in bids received and so forth, and the success of the process? And can you account for that difference?

Mr. NEDD. Congressman, yes. In Colorado certainly the market environment played a major factor. Among all the——

Dr. HOLT. First characterize the difference, please.

Mr. NEDD. Well, the strong market, certainly the interest in Colorado, even though initially expressed, seems not to be there for leasing of solar. My understanding is with the state's authority to grant in renewable energy, my understanding is it wasn't as strong as in Nevada, where there had already been a need in Nevada for that.

The second was——

Dr. HOLT. So there were no bids?

Mr. NEDD. There were no bids.

Dr. HOLT. OK, yes.

Mr. NEDD. Well, we believe the size of the parcel factored into that. In Colorado the parcels were very large, and we discovered in Nevada if we can allow those parcels to be configured a little smaller, it was more susceptible to industry.

And a strong market, again. The interest with transmission and a number of other infrastructure factors we think played a role in that.

Dr. HOLT. Thank you. I thank my friend from California. I yield back my negative time. Thanks.

[Laughter.]

Dr. GOSAR. I want to yield to the other gentleman from California, Mr. Lowenthal.

Dr. LOWENTHAL. Thank you, Mr. Chair. I want to follow up with Mr. Nedd a little bit.

You know, when you said that you did not know—and, I agree, it is a little complicated—the minimum bid you established for competitive solar, I do have in front of me the Federal Register of May 30, 2014, where the notice of competitive auction for solar energy development on public lands in the State of Nevada, and they talk about the minimum bonus bids have been determined for each of the parcels. And, without going through it all, when you add it up, you figure out, it comes to a little bit above—around \$20 per acre.

I would like to hear specifically from you, not necessarily now, when you go back. But to me, it indicates that that \$20 per acre is significantly higher than what we have for onshore oil and gas. We are talking about making competitive bids here for alternative energy higher.

And so, again, I encourage Interior to bring forward that ANPR; we have such low rates for oil and gas revenues for onshore, even compared to offshore and even compared to alternative, that the American taxpayer is suffering greatly. And I think it really deserves to be protected.

My other question is for Mr. Huntley from The Wilderness Society. You know there has been a long history of oil and gas development on public lands. And this history has been characterized by competing interests, erupting many times into conflict and controversy. And now we are in the Nation's stages of a renewable energy development, and my question is how do we learn from some of these past lessons? How does H.R. 596 seek to move past controversy and grow cooperation and partnership when developing new forms of energy on public lands?

Mr. HUNTLEY. Thank you for the question. Mr. Wood earlier spoke to one important component, which is the opportunity to develop landscape-scale plans, to think before we commit lands to development in a manner that brings all range of interests to the table, so we can develop a plan for where things should go and, just as importantly, where development might not be the best use of those public areas.

The bill both empowers that to move forward, but, as important in our view, is the opportunity to not just add renewable power to the grid, but to add value to stakeholders for whom there may not be much incentive to participate in that process, that is, to play a role in helping shape what that plan should look like.

By creating a conservation fund, as well as following through on payments to local communities and states, there is an opportunity to be reinvesting, both in the landscape and in local communities. And we think the combination of those two is going to create much better outcomes, both for the industry and for all other users of the public land.

Dr. LOWENTHAL. Thank you. And, finally, Mr. Wilson. Chairman Wilson, you made it clear in your testimony that tourism and recreation are essential parts of your county's economy. How do you envision additional funds for recreational access and conservation from renewable energy generation royalties, improving those aspects for both La Paz County and other counties across the country?

Mr. WILSON. Well, Mr. Lowenthal, La Paz County being right on the Colorado River adjacent to California, we really appreciate the California dollars that come our way through tourism.

Dr. LOWENTHAL. And we appreciate giving you them.

[Laughter.]

Mr. WILSON. We do have a significant winter visitor population that utilizes off-road trails with off-highway vehicles. In order to protect those lands there, there needs to be a lot of signage and appropriate assessment done to make sure that those public lands are open to the public in an appropriate manner. And that is part of what needs to happen, not only in La Paz County, but throughout the areas where you have people wanting to utilize those public lands.

Dr. LOWENTHAL. Thank you. And the state that gives more than it receives yields back.

[Laughter.]

Dr. GOSAR. Well, being from the state that receives, we will take more.

I recognize the other gentleman from California, Mr. Costa.

Mr. COSTA. Thank you very much, Mr. Chairman, members of the subcommittee. I apologize to the witnesses for not being able to hear firsthand your testimony, although we did look at your statements. I have another subcommittee hearing going on next door, of which I was participating.

UC Merced is the newest member of the University of California system in my district. It hosts advance solar technology institutes on its campus in my district. The UC Solar Institute features world class researchers, as some of you may know, who work to make solar energy as efficient and effective as possible. One of their highest priorities is easing the system integration for solar energy flowing into communities, homes, and utilities. They have actually developed four patents, and they have another 20-plus that are pending.

Mr. Haubenstock—is that the correct pronunciation? Can you speak to how H.R. 596 will expand access to solar energy? And be brief, because I have a few other questions I want to ask.

Mr. HAUBENSTOCK. There are many aspects of the bill that we think would be very helpful to expansion of renewable energy, including solar energy. It is very important that some of the permanent reforms, including some of the aspects of Smart From the Start, as well as the Fast Track process, be institutionalized so

that infrastructure projects, including renewable energy projects, can benefit from tighter coordination of the Federal and state—

Mr. COSTA. How critical do you think are the states, are private land owners' participation that receive compensation or royalties or fixed rentals or up-front payments or other incentive schemes to expanding the use and the implementation of solar energy?

Mr. HAUBENSTOCK. In many jurisdictions, state and local governments do receive significant compensation from solar energy development. In other jurisdictions they don't. It is very important that state and local governments, which are tremendously burdened, have the opportunity to benefit from this renewable energy development.

We also strongly believe that conservation and recreational uses of Federal lands have sufficient funding. We are concerned in the tightly competitive environment for energy, that renewable energy be able to compete with all other forms of energy on a level playing field. And so we want to ensure that, on a going-forward basis, we can make what is commonly referred to as grid parity, renewable energy having the opportunity to equally compete—

Mr. COSTA. Well, and as the technologies advance, you know, as some of you may know, in California we initiated, under the previous Governor, Schwarzenegger, a 20–30 plan in which, by the year 2020, 30 percent of California's energy would be renewable. Solar is playing a large part of that.

At UC Merced they have actually developed a film that goes into window glass for commercial structures that allows these commercial buildings to generate power, yet you can still see through the windows, as a part of the development of that effort. That is just one of those technologies

Mr. Wood, how would the statutory establishment of the Federal leasing program support continued growth of renewable energy on public lands?

Mr. WOOD. Thank you, sir, for the question. I think, as has been suggested earlier, I think it just changes the paradigm generally, by bringing the communities, the counties that would be most affected, the states that would have the development occurring in their borders, and then the constituents, such as hunters and anglers, who could be impacted by development, it would bring those folks in as advocates for development, because they would be at the table, helping not only to shape where decisions to site occur, but they would also reap the benefits from the revenue-sharing that the bill contemplates.

The other point that I would make out is that this is a pilot project. It simply allows us to try a different approach to see if we can't bring people together, rather than create adversaries from the start.

Mr. COSTA. OK. Well, I think there is a lot of unused potential there. I don't think we have really begun to touch the surface, in my opinion, which goes to another point.

Mr. Nedd, does the Bureau of Land Management agree that a lease is a more appropriate way to site industrial facilities like wind and solar plants on public lands than using right-of-way? You know the BLM regulation states that leases shall be used to authorize use of public lands involving substantial construction devel-

opment or land improvement on which the investments of large amount of capital which are to be amortized over a period of time.

Mr. NEDD. Congressman, on the FLPMA, the BLM, certainly may issue a right-of-way grant or a lease. And so, the way BLM has been constructing these grants that some view as a lease, it is for a long-term process, and is done under FLPMA authority.

Mr. COSTA. My time has expired. But, Mr. Chairman, I would be curious to know, and maybe the BLM could provide a report to the subcommittee, there was an effort in the Southwest to provide corridors, pathway corridors, where there was large potential for solar expansion. And in some states, like California, there were hand-in-glove efforts to identify those areas and to make them available. And I think part of that has run amuck, at least that is my terminology, in terms of its implementation. I would like to kind of know where that is today.

Dr. GOSAR. I thank the gentleman. I am just going to finish up with a real quick question.

Mr. Wood, you hit on something here that a number of the other panelists have talked about, a master plan. And when you encourage people to come to the table at the drawing board, you are empowering them to be part of the solution, not part of the problem, you want to highlight that a little bit more?

Mr. WOOD. I just think it is something we have learned at Trout Unlimited, and just around the country, the hard way. The more often that you can bring the people who are most affected by development and conservation decisions, the soonest you can get them together at the table, typically the more durable those solutions are. And I think that frame of collaborative stewardship is exactly what H.R. 596 would foster across the public lands.

And the thing that is really important is that it is just a pilot bill. It just establishes the opportunity to see if this new model can actually work to bring stakeholders together. And, given the depth of the support for the bill, it certainly seems well worth trying.

Dr. GOSAR. Well, and the reason I bring that up is that in this committee we have had contentious arguments back and forth, but we also have mutual problems. When you look at our forest industry right now, so much of it is burning up, when we could be putting that to utilization and local communities benefiting.

I want my cake, and I want to eat it too. And I think everybody else wants to do that, too. And the most effective people are the people at the ground, people that are touched by it and are vested in it. And I think that is what is so important about trying to mitigate this, and showing an example for the future. So I appreciate your comments along those lines.

Members of the committee may have additional questions for the record, and I ask you to respond to these questions in writing.

One final order of business. I ask unanimous consent to enter into the record three items on H.R. 596: one from the Western Governors' Association, one from the Mojave County Board of Supervisors, and one from Trout Unlimited. Also, the National Wildlife Federation, as well.

[No response.]

Dr. GOSAR. With no objection, so ordered.

If there is no further business, and without objection, the committee is now adjourned. Thank you very much. Thanks, panelists. [Whereupon, at 11:58 a.m., the subcommittee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

PREPARED STATEMENT OF THE HON. PETER A. DEFazio, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Thank you Mr. Chairman, and thank you for holding a hearing on these three bills.

I introduced the Geothermal Production Expansion Act, H.R. 2004, with Mr. Simpson from Idaho, and I am also an original cosponsor of the Public Lands Renewable Energy Development Act, so I strongly support both of those bills and am glad that we are finally getting a hearing on them.

The issue here, as I see it, is making sure that all of our energy technologies—fossil and renewable—are on the same playing field.

I know the Majority likes to claim that this administration provides unfair advantages to renewable energy and is conducting a “war” on oil, natural gas, and coal—but that is completely untrue.

In fact, it is the fossil fuels, in particular oil and gas, that have some of the biggest sweetheart deals available on our public lands.

I’m not even talking about the unfair tax subsidies that we give to some of the most profitable companies in the world, although there are plenty of those and we should be taking those away.

I’m talking about the way the system is designed to make it as easy as possible to start drilling for oil and gas on public lands.

The Majority may not think it’s easy enough, but the fact is that thousands of wells are drilled on public lands each year, many with NEPA shortcuts established under the Republican Energy Policy Act of 2005.

Over the last 4 years, the administration has issued over 6 million acres of new oil and gas leases, with incredibly low minimum bids set in law, and over one and a half million of those acres were leased non-competitively.

Meanwhile, solar and wind are placed on BLM land using a right-of-way that may be appropriate for a pipeline or a road but is entirely inappropriate for a solar or wind farm.

The process is first-come-first-served, with no competition, and all the revenues go back to the Federal Treasury, so states and localities have no financial interest in the projects, nor any compensation for the impacts.

H.R. 596, the Public Lands Renewable Energy Development Act, levels the playing field. It mandates competitive leases for solar and wind, and directs some of the revenues back to the states and counties that are hosting the project. It also puts much-needed funding into improving sporting and recreation opportunities and protecting wildlife habitat.

The Geothermal Production Expansion Act, H.R. 2004, provides an important noncompetitive leasing option for geothermal developers, to ensure that they can develop their projects without being unfairly blocked by speculators who have no interest in producing energy.

Also, the companion to this bill passed the Senate unanimously earlier this month, and the Congressional Budget Office found that it would not cost anything.

The third bill, H.R. 1363, the Exploring for Geothermal Energy on Federal Lands Act, appears to be trying to copy EPAct and create a categorical exclusion for geothermal test drilling.

But those were a bad idea in EPAct, and have resulted in the inability to even check for special circumstances.

The language in this bill appears to go even farther, completely exempting these projects from NEPA.

We should be repealing the categorical exclusions that oil and gas drilling currently gets, not using them as a model for renewable energy.

I thank the witnesses for being here, and look forward to their testimony.

PREPARED STATEMENT OF THE AMERICAN WIND ENERGY ASSOCIATION ON H.R. 596

On behalf of the over 1,000 members of the American Wind Energy Association (AWEA¹), we appreciate the opportunity to share our views on H.R. 596, the “Public Lands Renewable Energy Development Act of 2013.”

AWEA is generally supportive of the existing right-of-way and rental fee structure for siting on BLM lands. On paper, at least, it is a reasonable process that results in a fair return to taxpayers. The industry has much less experience with the Forest Service. Only a single wind project has ever been permitted on Forest Service land, and it has not yet been constructed.

That said, even under the current processes for BLM and the Forest Service, it is much more complex, takes longer, and costs more to develop wind energy projects on public lands than private lands. That is why 98.6 percent of the currently installed wind energy capacity is on private lands.

AWEA is concerned that moving to competitive leasing will add complexity, time and expense, and in turn uncertainty, to developing on public lands, which will continue the trend of wind energy developers looking elsewhere. It is particularly complex for wind energy, which requires 1–2 years of testing for wind speeds before a company can determine whether a site is economically viable to develop or not. It is unlikely wind energy companies will bid for the right to put up a meteorological tower to test wind speeds without any explicit right to later apply to construct at that site. At the same time, it will be difficult to bid on a site as a package—the right to put up the tower that also comes with a right to apply to construct—without having the wind speed data up front, which cannot be accurately obtained without on-site testing.

AWEA recognizes and appreciates the intent of the bill supporters in making wind energy permitting more closely mirror other activities permitted on public lands and to ensure a fair return to taxpayers. The bill does include some worthy elements that AWEA supports, including directing a portion of the revenue paid by wind and solar projects back into BLM and state agencies to improve permitting for additional projects, sharing revenue with states and counties, and providing funds for conservation. However, AWEA is unsure that the 15 percent allocation for improved permitting will provide sufficient resources for this purpose, particularly given needs of the U.S. Fish and Wildlife Service and state agencies, and would appreciate the opportunity to further discuss this with the committee. H.R. 596 also includes helpful language changes that address some concerns raised by AWEA on previous versions of the bill. However, AWEA recommends additional changes; these recommendations are outlined below.

Further, it is important to understand the impact of H.R. 596 will be marginal, at best, if Congress fails to renew the production tax credit (PTC) for renewable energy, and create a long-term stable tax policy which treats all energy producers equally. Keeping taxes low on wind energy has contributed to a major American success story.

Status of wind energy in the United States

The U.S. wind industry:

- Has attracted over \$15 billion annually in investment into U.S. communities over the past 5 years;
- Supports more than 50,000 U.S. jobs; and,
- Has more than 550 manufacturing facilities in 44 states supplying the industry.

Wind energy is widely available. Presently, there are 61 gigawatts of wind energy installed in 39 states and Puerto Rico. Wind energy projects are being developed in many of the remaining 11 states without utility scale wind turbines, and several of those states are currently buying wind energy from outside their states to serve their customers because it is the lowest cost option available.

Wind energy is affordable. DOE data shows the average cost of wind energy has fallen 43 percent over the last 4 years, and that electric rates have increased less than half as much in the 10 states with the most wind energy compared to the 40 that have lesser amounts or none.

¹AWEA is the national trade association representing a broad range of entities with a common interest in encouraging the deployment and expansion of wind energy resources in the United States. AWEA’s members include wind turbine manufacturers, component suppliers, project developers, project owners and operators, financiers, researchers, renewable energy supporters, utilities, marketers, customers and their advocates.

Wind energy is reliable. On an average annual basis, wind energy already provides more than 25 percent of the electricity in two states and 10 percent or more in nine states. At the regional level, wind energy at times has provided upwards of 20 percent to 40 percent of electric generation in the plains states, Texas, California and the Pacific Northwest. All of this is without reliability concerns.

Specific suggestions for H.R. 596

1. **Consider authorizing two additional pilot sites:** Section 202 authorizes only two pilot projects, one for solar and one for wind energy. AWEA believes one additional pilot for each technology would provide for a more informed decision on whether competitive leasing will work. As with any analysis, representative sampling is critical—with only one site being evaluated, there could be something unique about that situation that causes it to work well, or not.
2. **Eliminate the requirement that bidders submit a development plan at the time of bidding:** Page 7 (lines 1–3) requires that bidders submit a development plan at the time of bidding. Given that bidders are not likely to have enough information about the site to submit a development plan, AWEA recommends that this provision of the legislation be eliminated.
3. **Be more explicit that the proposed pilot program will not create a moratorium on development while the pilot project is ongoing and any resulting regulations are drafted:** Page 11, lines 16–24, partially addresses this concern. But, AWEA believes language in S. 279, a similar Senate bill, is more direct and clear. Page 12 of that bill beginning on line 24 states “During the pendency of the pilot program, the Secretary shall continue to issue rights-of-way, in compliance with authority in effect on the date of enactment of this Act, for available sites not selected for the pilot program.” Similarly, S. 279 says, on page 15 beginning on line 4, “. . . until the program is established and final regulations for the program are issued, the Secretary shall continue to accept applications for rights-of-way on covered land, and provide for the issuance of rights-of-way on covered land . . .”
4. **Include a transition section to the bill that explicitly states that projects under development on public lands under the existing system will be grandfathered and not be subject to competitive leasing:** Developers have pursued right-of-way authorizations in good faith, including spending significant time and dollars to collect data on wind speeds, conduct environmental reviews and other preliminary activities. It creates too much business uncertainty and investment risk, and, frankly, is not fair, to change the ground rules mid-process and make such sites available to the highest bidder.

AWEA recommends that existing right-of-way (ROW) grants must be honored and holders of a Type II ROW for site testing should retain the right of first refusal to apply for Type III ROW for construction and operation without being subject to competitive leasing provisions.

Type II ROWs should be renewable for an unlimited number of times so long as a Type III ROW is being processed and a Plan of Development (POD) has been submitted.

Holders of Type III ROWs should also be allowed to proceed under the current rules and should not be subject to competition on an existing ROW. The need to accommodate these circumstances can be seen, for example, in a case where a developer with a Type II ROW needs more time to make the decision regarding whether to proceed with a Type III ROW application.

Besides existing ROWs that have been granted, AWEA proposes grandfathering any project that has a pending: (1) application for a ROW at the time any wind energy competitive leasing pilot program is established and, if that project is subsequently granted a permit, files for a Plan of Development (POD) within 1 year of expiration of the ROW permit; or (2) an application for site testing or development ROW as of the date the final regulations for the wind energy competitive leasing program are issued and submits a POD within 1 year of expiration of the ROW permit.

5. **Authorize the Secretaries to make different determinations for wind energy and solar energy, if justified:** The joint determination section on page 13 implies the Secretaries must make the same decision for wind and solar on whether to make competitive leasing permanent rather than a pilot program. S. 279 on page 13, lines 5–9, specifies that the Secretarial deter-

mination is “whether to establish a leasing program under this section for wind or solar energy, or both, on all covered land.”⁵

6. **Eliminate the requirement that capacity factors must be considered when establishing royalties:** Page 20 (lines 9–12) requires that capacity factors be considered when establishing royalties. AWEA recommends that this provision be eliminated as it could pick winners and losers by raising the cost of a more efficient technology.
7. **Eliminate indexing of royalties:** Page 16 (lines 21–25) and Page 17 (lines 1–7) require that the amount of royalties collected be adjusted to reflect changes in the Consumer Price Index. The potential for royalties to change will create uncertainty that will make it more challenging for project developers to obtain financing. Given this challenge, AWEA recommends that this provision of the legislation be eliminated.
8. **Provide direction to BLM and Forest Service on range of acceptable royalties:** In order to secure financing to construct a wind energy project, there needs to be some level of certainty about long-term project economics. To contribute to improved business certainty, AWEA recommends the inclusion of language in Section 203 based on Section 205(b) in S. 279, which specifies that for the first 10 years royalties for wind and solar are to be “not less than 1 percent, and not more than 2.5 percent, of the gross proceeds from the sale of electricity produced . . .” and “not less than 2 percent, and not more than 5 percent . . . during each year after that initial 10-year rate period.”
9. **Authorize the royalty revenue directed to permitting improvements under Section 204 to be made available for expenditure without further appropriation and without fiscal year limitation as is proposed for the conservation fund on page 25, lines 12–15.**

AWEA appreciates the opportunity to provide comments on this legislation. We look forward to working with the subcommittee on this important issue.

PREPARED STATEMENT OF THE GEOTHERMAL ENERGY ASSOCIATION
ON H.R. 1363 AND H.R. 2004

Mr. Chairman, members of the subcommittee, thank you for scheduling this hearing on geothermal legislation. GEA is a trade association that represents over 110 different companies and organizations ranging from project developers to equipment suppliers to specialist consultants that comprise the U.S. geothermal power industry. These companies and organizations are involved in the expanding geothermal market in the United States and worldwide. We would like to start with some background about geothermal today, and following that provide our views on the legislation before the subcommittee and some related issues.

BACKGROUND: THE GEOTHERMAL MARKET TODAY

The international geothermal power market is booming, growing at a sustained rate of 4 percent to 5 percent. Almost 800 geothermal projects are under development in 80 countries. Many countries experiencing economic growth, anticipating regulations related to climate change and realizing the values of geothermal power as a baseload and sometimes flexible source of renewable energy are supporting policies that encourage and support geothermal power development. These countries are on every continent and range from small island nations to large developed economies like China or the United States.¹

In contrast to the global market, in 2013 the U.S. market was a quieter place to do business. Yet growth continued during the past year, and this trend is expected to improve. New initiatives in Nevada, California, and Oregon could promise substantial increases in geothermal power over the next decade. For example, the Salton Sea Resource Area could be a significant source of growth for the U.S. geothermal power industry if several policy barriers are overcome in the near term. The Imperial Irrigation District has pledged to build up to 1,700 MW of geothermal power by the early 2030s at the Salton Sea as part of an environmental restoration and mitigation effort for the Salton Sea. If successful, this initiative could increase

¹ 2014 Annual U.S. & Global Geothermal Power Production Report, <http://geo-energy.org/events/2014%20Annual%20US%20&%20Global%20Geothermal%20Power%20Production%20Report%20Final.pdf>.

the geothermal nameplate capacity of the United States by 50 percent over the next 20 years. In addition Public Utility Commissions in Nevada and Oregon recently created potentially beneficial opportunities for geothermal power while state assemblies in Washington and New Mexico have clarified confusing legislation.

International

- About 530 MW of geothermal power came online globally to bring the world-wide installed capacity to just over 12,000 MW. That is the most megawatts to become operational in one year since 1997.
- In total there are about 12,000 MW in the pipeline and about 30,000 MW of geothermal resources under development. Of those 12,000 MW about 16 percent or 1,900 MW amount of planned capacity additions are under construction in 14 countries. If all geothermal power plants under construction are completed on schedule the global geothermal industry could reach about 13,450 MW of nameplate capacity by 2017.
- About 10 percent of global projects have drilled injection or production wells and/or are actually in the process of constructing a power plant. Another 50 percent of projects are in the exploration stage, meaning the first exploration wells were drilled, project funds have been acquired, and/or significant knowledge of the geothermal resource has been attained.

United States

- The U.S. geothermal power industry reached about 3,442 MW at the end of 2013. New or refurbished power plants became operational in Utah, Nevada, California, and New Mexico. In total the U.S. industry added about 85 MW of new capacity additions in 2013.
- In 2013 there were about 1,000 MW of planned capacity additions under development and about 3,100 MW of geothermal resource under development.
- Upcoming plans announced by Imperial Irrigation District at the Salton Sea Geothermal Resource Area could increase U.S. nameplate capacity by 50 percent over the next 20 years.
- Leading geothermal states, such as California, Nevada and Utah have significant amount of geothermal power potential with about 50 percent, 60 percent, and 60 percent of their estimated geothermal resource respectively, remaining untapped.

VALUES OF GEOTHERMAL POWER

Geothermal power has important values for utility power systems. It can be engineered to provide both firm and flexible solutions to the changing U.S. power system by providing a range of services including but not limited to baseload, regulation, load following or energy imbalance, spinning reserve, non-spinning reserve, and replacement or supplemental reserve. It is well known that geothermal plants can operate 24 hours a day with a steady output, regardless of environmental conditions. They are not subject to the unpredictability and voltage swings that variable energy resources (VER) face and, hence, can fulfill the necessary role of a renewable baseload power source. As aging baseload plants retire, geothermal plants can provide the generation these plants have historically provided to the power system.²

When engineered to do so, geothermal plants can ramp up or down quickly, allowing them to adjust to the changing needs of the power system and act as a flexible power source in addition to baseload. The increasing percentage of electricity produced from VER, such as solar and wind, is placing an escalating level of stress on power system designed for traditional fuels. The varying output can cause voltage swings in transmission lines, potentially creating power surges and blackouts.

This combination of firm and flexible power positions geothermal energy as an ideal candidate to fill several roles such as baseload, regulation, load-following, and reserve functions typically reserved for coal and/or natural gas plants. In addition to considerable environmental advantages over other fuels, geothermal plants generally lack the fuel costs of other baseload sources or the ancillary and transmission costs associated with variable energy resources, resulting in long-term stability in energy costs.

²The Values of Geothermal Energy, <http://geo-energy.org/reports/Values%20of%20Geothermal%20Energy%20Draft%20Final.pdf>.

Looking beyond these specific benefits, geothermal has a number of other attractive features, including:

- Geothermal power production has a positive impact on local economies, and creates a significant number of jobs per megawatt. One hundred MW of new geothermal power is estimated to create about 170 operation and maintenance jobs and over 600 annual construction and manufacturing jobs. These jobs are often in rural communities which suffer from high unemployment rates.
- Geothermal power has a smaller land footprint than most other energy sources, particularly when compared with other renewables.
- Geothermal power has very low emission levels. Binary plants produce near-zero GHG emissions while flash and dry steam plants represent a significant reduction compared to most other generation.
- Geothermal power's established history of consistent output demonstrates a level of reliability unmatched by other renewables. Geothermal fields in California have operated for over 50 years, while fields in Italy have operated for close to 100 years.

RESOURCE POTENTIAL

Despite its clear values as a firm or flexible power source, there remains much to do in defining the extent of the geothermal resource base in the United States. In 2008, based on pre-existing data, the USGS estimated that the 13 Western states have up to 16,457 MW available from known systems, up to 73,286 MW from resources yet to be discovered, and potentially up to 727,900 MW using Enhanced Geothermal Systems technology.³

But, given the regulatory and financial realities facing geothermal development, only a small fraction of this potential will be advanced toward production. A workshop of leading company and independent experts in 2010 recommended to DOE that "The Department of Energy (DOE) should set a goal of identifying within the next 10 years [geothermal] sites capable of producing 50,000–100,000MW of geothermal power (5–10% of total U.S. power generation), utilizing the full range of technologies, through a sustained national exploration effort, significantly supported by long-term federally funded programs."⁴

BARRIERS TO GEOTHERMAL DEVELOPMENT

Geothermal power projects have very unique development timelines that are substantially different from most, if not all, other energy technologies. A greenfield project typically starts with several years of exploration and drilling, followed by a comparatively brief construction period, and then several decades of operation. This timeline creates unique risks and challenges for the geothermal industry.

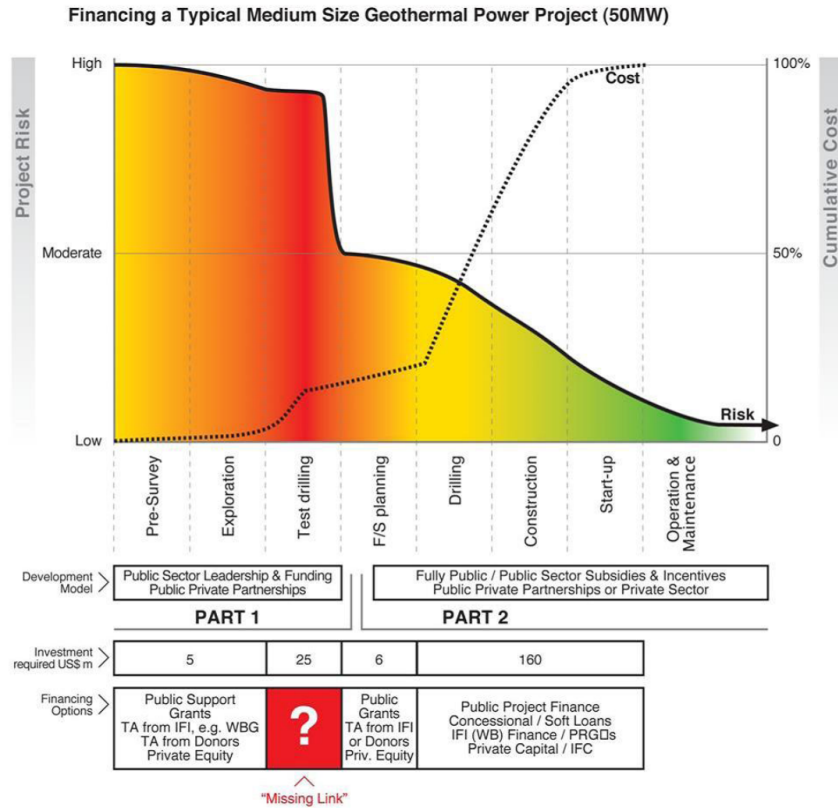
The World Bank's ESMAP Program developed the graphic below to show the risk profile of a geothermal power project.⁵ While this was designed to represent a typical project in the international market, it largely reflects the risk profile of U.S. projects—with one exception. The exception is that while internationally there are public grants to support early exploration risk, the United States does not provide such support making the assumed risk at this early critical phase for U.S. projects greater than shown. Notably, the ESMAP study also found, "A full-size geothermal development project typically takes from 5 to 10 years to complete." This is consistent with what GEA's researchers have found, which is that a typical Greenfield U.S. geothermal project will take at least 6–8 years from initiation to completion.

³ <http://pubs.usgs.gov/fs/2008/3082/pdf/fs2008-3082.pdf>.

⁴ Report on Workshop on Exploration and Assessment of Geothermal Resources September 21–22, 2010, Reno, NV, http://geo-energy.org/pdf/Wkshop_Report_Final.pdf.

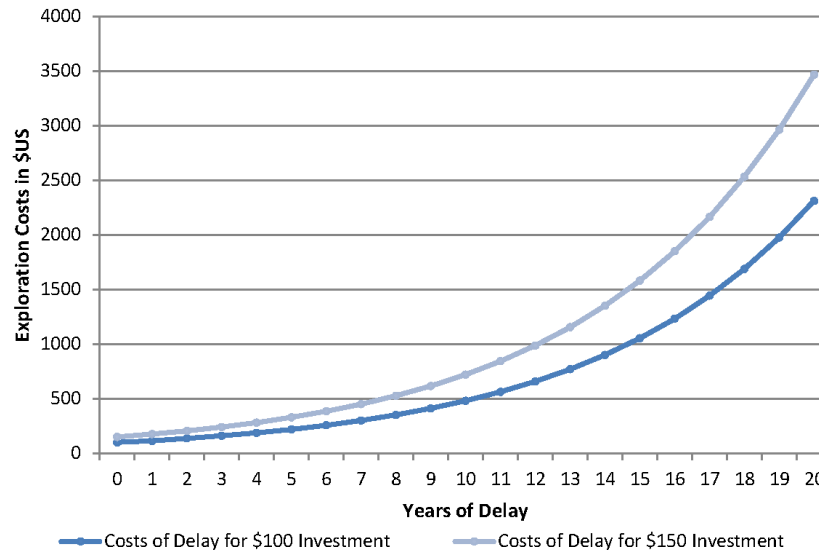
⁵ Geothermal Handbook, http://www.esmap.org/Geothermal_Handbook.

Figure 1: Risk Profile of a Geothermal Power Project



An important factor that increases the actual cost of exploration is the tremendous associated risk and possible time delay that may take place before the project begins to pay-back. Private companies active in exploration do not have access to commercial bank loans to finance these activities and are thus required to use their own capital or look for investors willing to share risks and ownership (equity). In finance, high risk means high rates of return. Equity invested in geothermal projects is expected to yield an annual rate of return of about 17 percent (Owens, 2002). Investments related to particularly risky activities (i.e. initial exploration phases) should thus expect even higher rates of return.

As a result of high risk and interests rates and long project development time frames, the effective cost of exploration can ultimately soar. The Figure below is from a study prepared by GEA in 2004 which carefully examined the factors that contribute to the cost of geothermal energy.

Figure 2: Financial Impact of Delay on Exploration Costs

Note: The above table and chart show the evolution of the expected value of a \$100 and \$150 capital investment when a 17% rate of return is considered. This illustrates the financial impact delays may have on the project viability. This chart assumes that all permits are obtained easily and without lawsuits.⁶

Perhaps not surprisingly, the study which produced this chart also found that for project confirmation, “actual cost is strongly influenced by the cost of money and time delays.” Together, the time involved in carrying financing for project development activities can dominate the factors that determine a geothermal project’s affordability.

H.R. 1363: EXPLORING FOR GEOTHERMAL ENERGY ON FEDERAL LANDS ACT

One key barrier that raises costs for geothermal projects is long lead times. Bureaucracy can be particularly troublesome while geothermal developers wait for permits to explore for resources they have recently leased. Even when the leasing decision required National Environmental Policy Act (NEPA) review, there can be a long wait for subsequent approvals that raises costs for projects that require a lot of high-risk, upfront capital to begin with.

H.R. 1363 will help address this problem of long lead times by streamlining part of the NEPA permitting process for exploration on Federal lands. This act will create a better balance between geothermal developers exploring for geothermal resources and damaging the environment or local ecosystems through drilling activities. In general if an exploration well will require less than 5 acres of soil or vegetation disruption, the well is no deeper than 2,500 feet and the hole is less than 8 inches in diameter; then the project will qualify for NEPA exclusion under H.R. 1363. The Exploring for Geothermal Energy on Federal Lands Act would support greater geothermal development by clearly defining and enhancing the existing Categorical Exclusion (CX) policy and setting timelines that create accountability and remove the uncertainty from the NEPA process.

GEA also supports provisions of S. 362 that propose a new Federal loan program to promote exploratory geothermal drilling and promote mapping and development of the Nation’s substantial untapped geothermal potential. The economic obstacles

⁶Factors Affecting Cost of Geothermal Development, <http://geo-energy.org/reports/Factors%20Affecting%20Cost%20of%20Geothermal%20Power%20Development%20-%20August%202005.pdf>.

to geothermal exploration are substantial and an effective program to promote exploratory drilling is critical to the long-term growth of geothermal energy in the United States. A successful national geothermal exploration initiative could unlock tens of thousands of megawatts of undeveloped power potential.

S. 363/H.R. 2004: GEOTHERMAL PRODUCTION EXPANSION ACT OF 2013

One significant challenge when developing any geothermal project is aligning the land acquired with the geothermal reservoir underground. A lease when issued has boundaries drawn very speculatively. The lessee may find after further exploration and drilling that it does not cover an adequate portion of the resource.

H.R. 2004 attempts to mitigate this challenge by allowing developers to obtain a conjoining Federal lease to one the developer already owns if it consists of not less than acre and not more than 640 acres and is not already leased or nominated to be leased. This will be permissible provided that the developer can prove that there is a valid discovery of geothermal resources on the land for which the qualified lessee holds the legal right to develop geothermal resources, and show that the thermal feature extends into the adjoining areas.

In 2005 Congress enacted sweeping changes in the Federal geothermal leasing laws, and we believe those changes, while generally positive, need some correction to reflect the uncertainties inherent in geothermal power development and encourage successful production from Federal leases. We believe H.R. 2004 makes a limited and important change in the Federal geothermal leasing laws, which otherwise allows no exception to a requirement for competitive bidding.

Similarly, we wish to call to the committee's attention a provision of H.R. 1363 that addresses a different, but geothermal law related problem facing Federal oil and gas leases. The sweeping move to an all competitive leasing program may be unintentionally blocking existing Federal oil and gas lease holders from utilizing co-produced geothermal fluids. If a Federal oil and gas lessee wished to utilize co-produced hot water to produce power, under current law they may have to obtain a lease through competitive bidding. This effectively stifles the potential for co-production from oil and gas wells. According to the U.S. Department of Energy, 25 billion barrels of hot water is produced annually from oil and gas wells within the United States, some significant portion of which is on Federal lands.

CONCLUSION

Geothermal is a largely untapped resource which holds significant promise to be part of our Nation's future energy mix. To do so, we will need to reduce the long lead-time and risks associated with geothermal project development.

GEA supports both H.R. 1363 and H.R. 2004. Both seek to address the uncertainty involved in developing geothermal resources and by reducing risk and reducing lead times will help achieve the potential of geothermal energy. In addition, we encourage the committee to examine provisions in related bills that would support exploration drilling and facilitate co-production of geothermal power from oil and gas leases.

Thank you for considering our views.

LETTER SUBMITTED FOR THE RECORD ON H.R. 596

ARIZONA WILDLIFE FEDERATION * COLORADO WILDLIFE FEDERATION
 IDAHO WILDLIFE FEDERATION * NATIONAL WILDLIFE FEDERATION
 NEBRASKA WILDLIFE FEDERATION * NEVADA WILDLIFE FEDERATION
 NEW MEXICO WILDLIFE FEDERATION * LOUISIANA WILDLIFE FEDERATION
 WYOMING WILDLIFE FEDERATION

JULY 29, 2014.

Hon. DOUG LAMBORN, *Chairman*,
 Hon. RUSH HOLT, *Ranking Member*,
U.S. House of Representatives,
Washington, DC 20510.

Re: H.R. 596, the Public Land Renewable Energy Development Act

DEAR CHAIRMAN LAMBORN AND RANKING MEMBER HOLT:

The undersigned groups and organizations, representing millions of hunters, anglers, fish and wildlife professionals, and outdoor enthusiasts and businesses, are writing to thank you for beginning the legislative process for H.R. 596, the Public Land Renewable Energy Development Act, by holding a hearing.

As affiliates of the National Wildlife Federation, we are understandably concerned with the impacts of all types of development on wildlife and our Nation's unique public lands. While we support the development of renewable energy resources on public lands, we want to make sure that it is done the right way. That is why we actively support passage of H.R. 596. This legislation takes many positive steps to ensure that renewable energy development not only gives back to local communities and states but also to the natural world. By creating a conservation fund to offset the impacts of development on fish and wildlife habitat, H.R. 596 takes important and necessary steps to ensure that energy development does not permanently hinder the hunting and fishing opportunities we currently enjoy. In particular, we are extremely supportive of the provisions of H.R. 596 that apply a substantial portion of royalty revenue to offsetting impacts to fish and wildlife habitat and securing recreational access to Federal lands, ensuring there is a balance between development and hunting and fishing opportunities. We are confident that passage of the Public Land Renewable Energy Development Act will help wind and solar development on public lands move forward in a way that sustains our Nation's unparalleled sporting heritage.

Wind and solar energy development is a growing industry on our public lands, and now is the time for Congress to make sure that it proceeds in a way that is efficient, beneficial to local communities, and balanced with other land uses such as hunting and fishing. H.R. 596 would chart such a course. We are excited that you are taking positive steps to ensure enactment of this legislation so that as renewable energy development on our public lands moves forward, its full range of benefits may be realized. Thank you again for holding this hearing.

Sincerely,

ARIZONA WILDLIFE FEDERATION
 COLORADO WILDLIFE FEDERATION
 IDAHO WILDLIFE FEDERATION
 NATIONAL WILDLIFE FEDERATION
 NEBRASKA WILDLIFE FEDERATION
 NEVADA WILDLIFE FEDERATION
 NEW MEXICO WILDLIFE FEDERATION
 LOUISIANA WILDLIFE FEDERATION
 WYOMING WILDLIFE FEDERATION

LETTER SUBMITTED FOR THE RECORD ON H.R. 1363

CENTER FOR BIOLOGICAL DIVERSITY * DEFENDERS OF WILDLIFE * EARTHJUSTICE
 ENVIRONMENTAL PROTECTION INFORMATION CENTER * KLAMATH FOREST ALLIANCE
 LEAGUE OF CONSERVATION VOTERS * NATURAL RESOURCES DEFENSE COUNCIL
 SIERRA CLUB

JULY 28, 2014.

DEAR REPRESENTATIVE:

On behalf of the undersigned organizations and the millions of members we represent, we write to express our strong opposition to Section 2 of H.R. 1363, the Exploring for Geothermal Energy on Federal Lands Act, which will seriously jeopardize meaningful public input and environmental review under the National Environmental Policy Act (NEPA).

As currently drafted, Section 2(b) of the bill exempts proposals for geothermal exploration test projects from NEPA compliance. Specifically, the bill states that Section 102(2)(C) of NEPA, which requires the completion of an Environmental Impact Statement (EIS) when a project will have significant impacts, shall not apply to geothermal exploration test projects. While agencies would still be required to conduct an Environmental Assessment (EA), the proposed exemption risks undermining the fundamental purposes of NEPA: to ensure that all potential impacts of a project are fully known and disclosed and to provide the public and all affected stakeholders an opportunity to provide input on decisions affecting their communities.

Strangely, this bill seeks to exempt projects from further NEPA review only when the agency has concluded a project could significantly impact the environment and health of local communities. Under Section 102(2)(C) of NEPA, agencies are required to prepare an EIS only if a project will significantly affect the quality of the human environment.¹ The primary purpose of an EA is to determine whether a project will indeed result in significant impacts and therefore require the preparation of an EIS. Understood in the context of the entire NEPA process, H.R. 1363 exempts agencies from NEPA analysis precisely when further review and community input is most needed—when the agency analysis in an EA reveals significant risks to communities and the environment.

The National Environmental Policy Act plays a critical role in ensuring that geothermal projects on public lands are sited and carried out in a transparent, collaborative, and responsible manner. By involving the public and state, local, and tribal governments, NEPA ensures that all stakeholders are engaged in decisions affecting the health, economy, and environment of their local communities.

By preventing fully informed decisionmaking and shielding decisions from public scrutiny, Section 2(b) of H.R. 1363 risks unwise and irresponsible development on public lands. While we appreciate encouraging the development of renewable energies, we believe such development should occur responsibly, transparently, and with meaningful public involvement.

Sincerely,

CENTER FOR BIOLOGICAL DIVERSITY
 DEFENDERS OF WILDLIFE
 EARTHJUSTICE
 EPIC—ENVIRONMENTAL PROTECTION INFORMATION CENTER
 KLAMATH FOREST ALLIANCE
 LEAGUE OF CONSERVATION VOTERS
 NATURAL RESOURCES DEFENSE COUNCIL
 SIERRA CLUB

¹ 142 U.S.C. 4332(2)(C).

[LIST OF DOCUMENTS SUBMITTED FOR THE RECORD RETAINED IN THE
COMMITTEE'S OFFICIAL FILES]

—Geothermal Energy Association—National Geothermal Summit,
August 5 & 6, 2014, Reno, NV, Powerpoint Presentation submitted
as part of Scott Nichols' prepared statement

**The following documents were submitted by Representative
Paul Gosar:**

—Letter from Rep. Gosar to Mohave County Board of Supervisors

Endorsement letters from the following organizations:

- County of Riverside
- Outdoor Alliance
- Sportsmen for Responsible Energy Development/NACo
- San Luis Valley County Commissioners Association
- Group letter signed by various hunters, anglers groups and
fish and wildlife professionals, and outdoor enthusiasts (includ-
ing Trout Unlimited, The Nature Conservancy, Ducks
Unlimited, The American Sportfishing Association, The
Association of Fish and Wildlife Agencies)
- The County Supervisors Association of Arizona
- SW CO Council of Governments
- Resolution of UT Assoc. of Counties
- The Western Governors' Association Letter
- The Western Governors' Association testimony FTR
- Email from El Paso County Commissioner with list of endorse-
ments
- Montana Association of Counties letters to Daines, Tester and
Baucus
- The National Association of Counties
- The Nature Conservancy
- Nevada Association of Counties
- New Mexico Association of Counties
- NPS testimony before Senate hearing on S. 2111, July 23, 2014
- Association of Oregon Counties
- AZ Fish and Game
- County of San Bernardino, CA
- Maricopa, CA County Resolution
- Sonoran Institute
- County Supervisors Association of AZ
- Idaho Association of Counties
- UT State University "Local Development, Local Benefits: H.R.
596 and Renewable Energy in Arizona"
- AZ Game and Fish Department News Release
- Mohave County Board of Supervisors